



United States Department of the Interior

Bureau of Land Management

Eastern States
Southeastern States Field Office
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206
<http://www.es.blm.gov>



IN REPLY REFER TO:
3100 (020) AM

December 20, 2012

Memorandum

To: State Director, Eastern States (ES-930)

From: Field Manager, Jackson

Subject: National Environmental Policy Act (NEPA) Review for Expressions of Interest (EOI) in Louisiana

We have completed our NEPA review for 6 EOIs in Louisiana (listed in Attachment 1). The Environmental Assessment (EA) Form is attached. This is planned for the upcoming June 2013 lease sale. Please return a signed copy of the EAs to me for our records. If you have any questions, please contact Alison McCartney at (601) 977-5407.

Trace Guess

(Acting for) BDawson

2 - Attachments

- 1 List of EOIs Processed
- 1 EA Document



WILD HORSES & BURROS • CADASTRAL SURVEY • GENERAL LAND OFFICE RECORDS • MINERALS • RENEWABLE RESOURCES



Attachment 1
List of EOIs Processed by the Southeastern States Field Office
for the June Lease Sale, 2013
Submitted December 20, 2012

Louisiana
EOI #1581
EOI #1672
EOI #1711
EOI #1714
EOI #1715
EOI #1716

**BUREAU OF LAND MANAGEMENT
SOUTHEASTERN STATES FIELD OFFICE
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206**

ENVIRONMENTAL ASSESSMENT (EA) FORM

ES-020-2012-65
ES-020-2013-04
ES-020-2013-09
ES-020-2013-01
ES-020-2013-02
ES-020-2013-03

PROJECT NAME: EOI #1581, Rapides Parish, Louisiana Lease EA
EOI #1672, Caddo Parish, Louisiana Lease EA
EOI #1711, Rapides Parish, Louisiana Lease EA
EOI #1714, Caddo Parish, Louisiana Lease EA
EOI #1715, Caddo Parish, Louisiana Lease EA
EOI #1716, Caddo Parish, Louisiana Lease EA

TECHNICAL REVIEW:

| X | Program | Reviewer | Signature | Date |
|----------|------------------------------|--|-------------------------|-------------|
| X | Air Quality | Alison McCartney Natural Resource Specialist | <i>Alison McCartney</i> | 12/14/12 |
| X | ACEC | Alison McCartney Natural Resource Specialist | ASM | 12/14/12 |
| X | Botanical including T&E Spp. | Alison McCartney Natural Resource Specialist | ASM | 12/14/12 |
| | Communications (Dispatch) | | | |
| X | Cultural/Paleontology | John Sullivan Archeologist | <i>[Signature]</i> | 12/18/12 |
| X | Energy Policy | Alison McCartney Natural Resource Specialist | ASM | 12/14/12 |
| X | Environmental Justice | Alison McCartney Natural Resource Specialist | ASM | 12/14/12 |
| | Farmlands (Prime & Unique) | | | |
| | Fire Management | | | |
| X | Floodplain | Alison McCartney Natural Resource Specialist | ASM | 12/14/12 |
| X | Hazardous Material | Brian Kennedy Physical Scientist | <i>Brian Kennedy</i> | 12/14/12 |
| X | Invasive & Non-Native Spp. | Alison McCartney Natural Resource Specialist | ASM | 12/14/12 |
| | Lands/Realty | | | |

| | | | | |
|---|------------------------------------|--|----------------|----------|
| | Land Law Examiner | | | |
| | Law Enforcement | | | |
| X | Minerals | Alison McCartney Natural Resource Specialist | ASM | 12/14/12 |
| X | Native American Religious Concerns | John Sullivan Archeologist | ASM | 12/13/12 |
| | Operations | | | |
| | Range Management | | | |
| X | Recreation | Alison McCartney Natural Resource Specialist | ASM | 12/14/12 |
| X | Soils | Alison McCartney Natural Resource Specialist | ASM | 12/14/12 |
| | Surface Protection | | | |
| | Visual Resources | | | |
| | Water Rights | | | |
| X | Water Quality (Surface & Ground) | Alison McCartney Natural Resource Specialist | ASM | 12/14/12 |
| X | Wetlands/Riparian Zones | Alison McCartney Natural Resource Specialist | ASM | 12/14/12 |
| X | Wild & Scenic Rivers | Alison McCartney Natural Resource Specialist | ASM | 12/14/12 |
| X | Wilderness | Alison McCartney Natural Resource Specialist | ASM | 12/14/12 |
| | Wild Horse & Burro | | | |
| X | Wildlife including T&E Spp. | Alison McCartney Natural Resource Specialist | ASM | 12/14/12 |

Prepared by: Alison McCartney
Alison McCartney
Natural Resource Specialist

Date: 12/14/12

Reviewed by: Gary Taylor
Gary Taylor
NEPA Coordinator

Date: 12/14/12

Reviewed by: Duane Winters
Duane Winters
Resource Supervisor

Date: 12/14/12

Reviewed by: William Bagnall
~~Brian Kennedy~~ **WILLIAM BAGNALL**
Acting Minerals Supervisor

Date: 12/18/12

FINDING OF NO SIGNIFICANT IMPACT/DECISION RECORD

FINDING OF NO SIGNIFICANT IMPACT

Based on the analysis of potential environmental impacts contained in the attached environmental assessment (EA), I have determined that the proposed action will not have any significant impacts on the human environment and an environmental impact statement (EIS) is not required.

Grace Dues acting for
Bruce Dawson

12-18-12

Date

Field Manager

DECISION RECORD

It is my decision to authorize the offer to lease for Oil and Gas the proposed tracts located in Rapides and Caddo Parishes, Louisiana Meridian, Louisiana with legal descriptions: T5N, R4W, Sec. 4, SWNW, Rapides Parish (38.02 acres) (EOI #1581), T20N, R14W, Sec. 8, SESW, Caddo Parish (39.88 acres) (EOI #1672), T3N, R1E, Sec. 9, Entire Section, Rapides Parish (22.16 acres) (EOI #1711), T20N, R16W, Sec. 32, Lots 1 & 3, Caddo Parish, (91.56 acres) (EOI #1714), T20N, R16W, Sec. 36, Lot 1, Caddo Parish (9.12 acres) (EOI #1715), T19N, R16W, Sec. 6, Lot 1 and Fractional NE Quarter, Caddo Parish (28.08 acres) (EOI #1716). These nominations are all located on privately owned land in Louisiana Meridian, Louisiana.

Rationale for Decision

The decision to allow the proposed action does not result in any undue or unnecessary environmental degradation and is consistent with the laws and regulations of the Federal, State, or local government. The proposed action was subject to a 30-day public review.

Larry Denny, DSD, Natural Resources

6-12-13
Date

Assoc State Dir



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Southeastern States Field Office
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206



Environmental Assessment

ES-020-2012-65
ES-020-2013-04
ES-020-2013-09
ES-020-2013-01
ES-020-2013-02
ES-020-2013-03

EOI #1581, Rapides Parish, Louisiana Lease EA
EOI #1672, Caddo Parish, Louisiana Lease EA
EOI #1711, Rapides Parish, Louisiana Lease EA
EOI #1714, Caddo Parish, Louisiana Lease EA
EOI #1715, Caddo Parish, Louisiana Lease EA
EOI #1716, Caddo Parish, Louisiana Lease EA

Prepared by: Alison McCartney
Date: November 30, 2012

CH 1 – PURPOSE OF AND NEED FOR THE PROPOSED ACTION

Introduction

This environmental assessment (EA) is prepared to address six proposed federal oil and gas lease nominations in Caddo and Rapides Parishes, Louisiana pursuant to the Minerals Leasing Act of 1920, as amended. A federal oil and gas lease is a legal contract that grants exclusive rights to the lessee to develop federally owned oil and gas resources.

Need for the Proposed Action

The development of oil and natural gas is essential to meeting the nation's future needs for energy. Private exploration and development of federal oil and gas reserves are integral to the Bureau of Land Management's (BLM) oil and gas leasing programs under the authority of the Mineral Leasing Act 1920, as amended, the Mineral Leasing Act for Acquired Lands of 1947, as amended, the Federal Land Policy and Management Act of 1976 and the Energy Policy Act of 2005. The oil and gas leasing program managed by BLM encourages the development of domestic oil and gas reserves and reduction of U.S. dependence on foreign sources of energy. The tracts considered for lease in this analysis was nominated by Expressions of Interest (EOIs) from private industry.

On April 2, 2012 (EOI #1581), May 22, 2012 (EOI #1672), October 8, 2012 (EOI #1711), and September 4, 2012 (EOI #1714, 1715, and 1716), the BLM Southeastern States Field Office (SSFO) received a request from the BLM Eastern States Office for a National Environmental Policy Act (NEPA) analysis report on 228.82 acres of land with the following legal descriptions: T5N, R4W, Sec. 4, SWNW, Rapides Parish (38.02 acres) (EOI #1581), T20N, R14W, Sec. 8, SESW, Caddo Parish (39.88 acres) (EOI #1672), T3N, R1E, Sec. 9, Entire Section, Rapides Parish (22.16 acres) (EOI #1711), T20N, R16W, Sec. 32, Lots 1 & 3, Caddo Parish, (91.56 acres) (EOI #1714), T20N, R16W, Sec. 36, Lot 1, Caddo Parish (9.12 acres) (EOI #1715), T19N, R16W, Sec. 6, Lot 1 and Fractional NE Quarter, Caddo Parish (28.08 acres) (EOI #1716). These nominations are located on privately owned land in Louisiana Meridian, Louisiana.

Management Objectives of the Action

The objective of the proposed action is to make available for lease 228.82 acres in Caddo and Rapides Parishes, Louisiana to provide exclusive rights to the lessee to develop federally owned oil and gas resources.

Land Use Plan Conformance

The proposed action does not conflict with any known State or local planning, ordinance or zoning. This area is not covered by a BLM Resource Management Plan. According to the regulations at 43 CFR 1610.8 (b) (1), however, this environmental assessment will be used as a basis for making a decision on the proposal.

Applicable Regulatory Requirements and Required Coordination

Applicable regulatory requirements and required coordination for lease development of federal oil and gas minerals is authorized by several statutes including: The Mineral Leasing Act, as amended and supplemented (30 U.S.C. 181), The Mineral Leasing Act of 1947, as amended (30 U.S.C. 351-359), The National Historic Preservation Act, The American Indian Religious Freedom Act, The Native American Graves Protection and Repatriation Act, E.O. 13007, and/or other statutes and executive orders.

The following agencies/tribes were contacted (Appendix C):

U.S. Fish and Wildlife Service, Louisiana Ecological Services
Louisiana Natural Heritage Program
Louisiana State Historic Preservation Officer
Tunica-Biloxi Tribe of Louisiana
Caddo Nation of Oklahoma
Alabama Coushatta Tribe of Texas
Coushatta Indian Tribe
Chitimacha Tribe of Louisiana
Alabama-Quassarte Tribal Town
Thlopthlocco Tribal Town
Choctaw Nation of Oklahoma
Mississippi Band of Choctaw Indians
Seminole Tribe of Florida
Seminole Nation of Oklahoma
Jena Band of Choctaw
Quapaw Tribe of Oklahoma
Muscogee (Creek) Nation of Oklahoma
Alabama-Quassarte Tribal Town

The proposed leases were subject to public review for a 30-day period per publication of a newspaper of local distribution (Appendix E).

Decision(s) That Must Be Made

There are two decisions under consideration from the BLM for the proposed action. The first is to offer the federal oil and gas mineral estate for competitive leasing. The other decision would be to deny the action so that no development and surface disturbance would take place. BLM's policy is to promote oil and gas development as long as it meets the guidelines and regulations set forth by the National Environmental Policy Act of 1969 and other subsequent laws and policies passed by the U.S. Congress.

CH 2 – ALTERNATIVES INCLUDING THE PROPOSED ACTION

Introduction

Tracts of land have been nominated for a federal oil and gas lease in Caddo and Rapides Parishes, Louisiana. A federal oil and gas lease is a legal contract that grants exclusive rights to the lessee to develop oil and gas resources that may exist on split estate property.

Location

All six of the EOIs are located in Louisiana Meridian, Louisiana and have the following legal descriptions:

EOI #1581 - T5N, R4W, Sec. 4, SWNW, Rapides Parish (38.02 acres)

EOI #1672 - T20N, R14W, Sec. 8, SESW, Caddo Parish (39.88 acres)

EOI #1711 - T3N, R1E, Sec. 9, Entire Section, Rapides Parish (22.16 acres)

EOI #1714 - T20N, R16W, Sec. 32, Lots 1 & 3, Caddo Parish, (91.56 acres)

EOI #1715 - T20N, R16W, Sec. 36, Lot 1, Caddo Parish (9.12 acres)

EOI #1716 - T19N, R16W, Sec. 6, Lot 1 and Fractional NE Quarter, Caddo Parish (28.08 acres)

Proposed Action

The BLM, SSFO received six nominations or EOIs, to lease 228.82 acres of federal mineral estate for oil and gas development in Caddo and Rapides Parishes, Louisiana. The leases would give the lessee exclusive rights to explore and develop oil and gas reserves on the lease, but does not in itself authorize surface disturbing activities. The competitive lease provides exclusive rights to develop the federal oil and gas resources, but does not obligate the company to drill a well on the federal mineral estate. The lease can be used to consolidate acreage to meet well spacing requirements, and/or the mineral estate may be acquired for speculative value. The BLM will require applicants to adhere to stipulations and lease notices/best management practices for gas wells (Appendix B). The attached stipulations and lease notices/best management practices have been formulated while conducting our impact analysis and are made part of the proposed action.

The proposed nominations, if approved, would be offered for competitive sale with stipulations and notices generated through this and other consultations, as well as the National Environmental Policy Act (NEPA) process. Once awarded, the successful bidder is required to submit an Application for Permit to Drill (APD) to the BLM before any ground disturbance is authorized. In the APD, the company identifies a proposed drill site and provides the BLM with specific details on how and when they propose to drill the well within the constraints of the lease

document. Upon receipt of an APD, BLM conducts an onsite inspection with the company, and when possible the private land owner or surface managing agency. NEPA and the Endangered Species Act (ESA) requirements must also be met at the APD stage and in those cases where there is the potential to affect federally or state-listed species, a site specific biological assessment is written, including the results of any biological surveys that may be indicated. This is submitted to U.S. Fish and Wildlife Service and/or the state wildlife agency for consultation, as appropriate. The lessee is required, as per lease stipulations, to comply with the recommendations of these consultations.

Typically, after approval of an APD, the petroleum industry follows a general plan and process for all proposed drill sites, as follows:

Spacing for the tract will be 40 acres per well. Preparation for the drilling process includes construction of a road, drilling pad, and reserve pit. Constructed access roads normally have a running surface width of approximately 30 feet; the length is dependent upon the well site location in relation to existing roads or highways. The average length of road construction will be about 0.5 miles. Therefore, about 2 acres would be affected by road construction. Typically 2.5 acres are cleared and graded level for the construction of the drilling pad for a well. If the well is gas and productive, and the flowline is in the road, we can estimate that another 0.5 acres may be affected by flowline construction. The total disturbed area for drilling a productive well will be approximately 5 acres. These disturbances are typical for private or Federal Ownership well locations. The excavation reserve pit is usually about five feet deep and is lined with bentonite clay to retain drilling fluids, circulated mud, and cuttings. Plastic or butyl liners (or its equivalent), that meet state standards for thickness and quality, are used on occasions when soils are determined incapable of holding pit fluids.

Because of the cost of the drilling rig, drilling usually continues around the clock. Wells in this area are usually drilled in 30 days. Once drilling is completed, excess fluids are pumped out of the pit and disposed of in a state authorized disposal site and the cuttings are buried. Wells would be drilled by rotary drilling using mud as the circulating medium. Mud pumps would be used to force mud down the drillpipe, thereby forcing the rock cuttings out the wellbore. Water would normally be from a well drilled on the site, however, water could be pumped to the site from a local pond, stream or lake through a pipe laid on the surface. Approximately 1500 barrels of drilling mud would be typically kept on the location. If a tract is adjacent to a producing field and water production will be expected during the life of the field, separation, dehydration and other production processing may be necessary. Construction of facilities off the Federal lease may be needed to handle this processing. Some processing or temporary storage may be necessary on site.

During well pad construction, the topsoil is stockpiled to be used during restoration activities. If the well is successful, the drill pad would be reduced to about 100' x 100' with the remaining surface area, including the reserve pit, re-graded and restored as per the BLM and surface owner requirements. A lease notice in these proposed leases encourages the use of non-invasive cover plants during all restoration and stabilization activities. Final seed mixtures and plantings are determined with recommendations from BLM with approval of the land owner. The remaining

100' x 100' pad is maintained for the life of the well. The life of a productive well may be 25 years. Following abandonment, the pad is subject to the same restoration parameters.

The following information on the federal mineral tracts is based on information collected during site visits conducted in 2012, aerial photographs, and topographic maps. Mitigation methods for potential negative impacts are listed in Appendix B as lease stipulations and lease notices. These recommended lease stipulations and notices have been developed to provide general habitat protection and setbacks to exclude sensitive habitats from oil and gas development. Recommended mitigation for the proposed action is suggested as stipulations for freshwater aquatic habitat, cultural resources and tribal consultations, endangered species and special plant species (Appendix B). Additional surveys may be required for special status species after site-specific proposals have been received by BLM during the development phase.

No Action

Under the No Action Alternative, the request to offer the proposed tracts for oil and gas lease would be denied. Potential economic benefits of production from this lease would be jeopardized.

CH. 3 – DESCRIPTION OF THE AFFECTED ENVIRONMENT

Introduction

EOIs #1581 and #1711 are located in Rapides Parish in south-central Louisiana. EOIs #1672, #1714, #1715, and #1716 are located in Caddo Parish in northwest Louisiana. The parcels are entirely within the West Gulf Coastal Plain Ecoregion within the Coastal Plain Province. This region is characterized by a southward facing plain of low, slightly hilly terrain that becomes a flat plain to the south and a broad marshy zone near the coast (USGS 1998).

All 6 nominations are located on privately owned land in Louisiana Meridian, Louisiana with the following legal descriptions: T5N, R4W, Sec. 4, SWNW, Rapides Parish (38.02 acres) (EOI #1581), T20N, R14W, Sec. 8, SESW, Caddo Parish (39.88 acres) (EOI #1672), T3N, R1E, Sec. 9, Entire Section, Rapides Parish (22.16 acres) (EOI #1711), T20N, R16W, Sec. 32, Lots 1 & 3, Caddo Parish, (91.56 acres) (EOI #1714), T20N, R16W, Sec. 36, Lot 1, Caddo Parish (9.12 acres) (EOI #1715), T19N, R16W, Sec. 6, Lot 1 and Fractional NE Quarter, Caddo Parish (28.08 acres) (EOI #1716). (Appendix A).

EOI #1581

This 40 acre parcel is located < 3 miles southwest of the town of Lena and Interstate 49. A parish road runs east/west through the northern half of the tract. A gas pipeline runs east/west through the southeast corner. Carnaham Creek is located right outside of the northwest boundary of the tract. This Creek drains into Cane River which is a tributary to the Red River. Approximately 50% of the tract is cleared while the remainder contains a mixed hardwood forest.

EOI #1672

This 40 acre tract is located <1 south of the town of Belcher and Highway 71. A gravel road runs north/south diagonally through the center of the tract. Several buildings are located in the northwest corner with 90% of the tract cleared. A small patch (< 5 acres) of planted hardwood trees is located just south of the buildings. Cowhide Bayou is located < 0.5 miles west and the Red River is located < 1 mile east of the tract.

EOI #1711

EOI #1711 consists of 22.16 acres and is located < 5 miles south of Alexandria. The tract is located on the bank of the Red River and is less than 2 miles east of Highway 1. A levee runs north/south through the middle and a parish road runs north/south through the east corner of the tract. Approximately 80% of the tract is cleared and consists of a grass pasture. The tract contains two strips of mixed hardwoods that surround areas that are wet for portions of the year.

EOI#1714

This 91.56 acre parcel is located ~ 5 miles west of the town of Mooringsport and Highway 169. A parish road runs east/west through the southern portion and 2 private roads run north/south through the center of the tract. There are several houses with ~ 65% of the tract cleared. The southern quarter of the tract contains a mixed hardwood/pine forest. Two intermittent creeks run through this area and the entire tract is within a floodplain. This tract is located on the southern bank of Caddo Lake.

EOI#1715

EOI #1715 consists of 9.12 acres and is located < 0.5 miles from the town of Mooringsport, Highway 169 and Caddo Lake. A road runs through the southern corner and there are several buildings on the tract. The parcel is located within a floodplain and ~ 90% consists of a mixed hardwood/pine forest.

EOI#1716

EOI #1716 consists of 2 separate tracts totaling 28.08 acres located less than 0.5 miles from one another. They both border Buzzard Bay in Caddo Lake. They are located < 1 mile west of EOI #1714. A road runs east/west on the northern boundary of the northern tract. There are several houses on both tracts although ~ 80% of the parcels consist of a mixed hardwood/pine forest.

Description of Project Area

Based on review of the elements listed on the SSFO NEPA Form and consideration of the Purpose and Need statement prepared for this EA, the following elements will be addressed in this EA: Air Quality, Environmental Justice, Cultural Resources, Native American Religious Concerns, Invasive/Exotic Species, Soils, Special Status Species, Migratory Birds of Concern, Wildlife and Vegetation, Wastes, Hazardous or Solid, Water Quality, Surface/Ground, Wetland/Riparian Areas/Floodplains, and Energy Policy.

Air Quality

The Clean Air Act of 1970, as amended, requires the establishment of National Ambient Air Quality Standards (NAAQS). Both primary and secondary standards are now in effect. Primary standards define levels of air quality that the Administrator of the Environmental Protection Agency (EPA) judges to be necessary, with an adequate margin of safety, to protect the public health. Secondary standards define levels of air quality that the Administrator of the EPA judges to be necessary to protect the public from any known or anticipated adverse effects of a pollutant. The NAAQS pollutants are monitored in Louisiana by the Louisiana Department of Environmental Quality (LDEQ). These include carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide, total suspended particulate, particulate matter less than 10 microns, and lead. Ambient air quality measurements taken by the Louisiana Division for Environmental Quality (LDEQ) indicate that ambient air quality for the state is within the standards, except in the Baton Rouge area where air quality is in nonattainment for ozone (2008).

Environmental Justice

Title IV of the Civil Rights Act of 1964 and related statutes ensure that individuals are not excluded from participation in, denied the benefit of, or subjected to discrimination under any program or activity receiving federal assistance on the basis of race, color, national origin, age, sex, or disability. Executive Order 12898 on Environmental Justice directs that programs, policies, and activities not have a disproportionately high and adverse human health and environmental effect on minority and low-income populations.

Cultural Resources

A literature search was conducted at the Louisiana Division of Archaeology online site files which indicates that there are known historic properties (36 CFR 800.16(l)) near EOI #1581 and 1711. However, the tracts have not been surveyed for cultural resources. These tracts may have sites that would contribute important information about our country's prehistory. While the lands within EOI #1672, 1714, 1715 and 1716 have not been surveyed and there are no recorded sites within one mile of the leasing areas, the proposed lease areas may have sites that would qualify as historic properties (36 CFR 61). A professionally conducted survey for historic properties would add information on human utilization of this area.

Native American Religious Concerns

Federally recognized Native Americans have been contacted about this proposed undertaking. However, currently, there are no known sites used by Native Americans for religious purposes. There are no known Sacred Sites or traditional cultural properties on these tracts. If any such sites are present, access would be by an agreement between the landowner and the Native Americans. The BLM has no authority over access to these tracts. The BLM's responsibility is limited to the area of surface disturbance if or when a proposal for development is submitted.

Invasive Exotic Species

There are a number of non-native species that are considered invasive in Louisiana and are monitored by the Louisiana State University (LSU) Ag Center. The following provides a list of some of the invasive species that can be found in Louisiana:

| COMMON NAME | SCIENTIFIC NAME |
|------------------------|------------------------------------|
| Alligator weed | <i>Alternanthera philoxeroides</i> |
| Japanese climbing fern | <i>Lygodium japonicum</i> |
| Chinaberry | <i>Melia azedarach</i> |
| Johnson grass | <i>Sorghum halepense</i> |
| Chinese privet | <i>Ligustrum sinense</i> |
| Japanese honeysuckle | <i>Lonicera japonica</i> |
| Brazilian verain | <i>Verbena brasiliensis</i> |
| Cogon grass | <i>Imperata cylindrica</i> |
| Chinese tallow tree | <i>Triadica sebifera</i> |
| Common salvinia | <i>Salvinia minima</i> |
| Hydrilla | <i>Hydrilla verticillata</i> |
| Mimosa | <i>Albizia julibrissin</i> |
| Water hyacinth | <i>Eichhornia crassipes</i> |

Source: LSU, 2004; USDA 2007.

Japanese honeysuckle and Chinese privet were observed on EOI #1716. Invasive species were not observed on the other tracts.

Soils

EOI #1581

There are 3 soil types in this parcel: Kisatchie – Cadeville Association, hilly, Ruston fine sandy loam, 1-3% slopes, and Guyton Complex, frequently flooded. The Kisatchie – Cadeville Association comprises 65% of the tract with the Ruston fine sandy loam, comprising 18% and Guyton Complex 17%. Kisatchie – Cadeville Association can be found on side slopes. Its parent material is clayey marine deposits and it is well drained with a low available water capacity (about 3.7 inches). Ruston fine sandy loam can be found on hillslopes. Its parent material is Pleistocene loamy fluviomarine deposits and it is well drained with a moderate available water capacity (8.6 in.). Guyton Complex can be found on floodplains. Its parent material is loamy alluvium of halocene age and it is poorly drained with a high available water capacity (~ 11.9 in.).

EOI #1672

There are 3 soil types in this parcel: Moreland silty clay loam, Norwood silt loam, and Norwood silty clay loam. Moreland silty clay loam comprises 54% of the tract and is located in the northwest half, Norwood silt loam comprises 35%, and Norwood silty clay loam 11%. Moreland silty clay loam can be found on natural levees. Its parent material is red river clayey alluvium and it is somewhat poorly drained with a high available water capacity (about 9.7 inches).

Norwood silt loam can be found on natural levees. Its parent material is calcareous red river loamy alluvium and it is well drained with a high available water capacity (11.4 in.). Norwood silty clay loam can be found on natural levees. Its parent material is calcareous red river loamy alluvium and it is well drained with a high available water capacity (11.5 in.).

EOI #1711

There are 3 soil types in this parcel: Roxana very fine sandy loam, gently undulating, Levees-Borrow pit complex, nearly level to strongly sloping, and open water. Roxana very fine sandy loam comprises 89% of the tract, the Levees-Borrow pit complex runs north/south through the center of the tract and represents 10% of the acreage, and open water, representing 1% of the acreage is located in the south-central portion of the tract. Roxana very fine sandy loam can be found on natural levees. Its parent material is loamy alluvium and it is well drained with a high available water capacity (about 9.0 inches). Parent material for Levees-Borrow pit complex is spoil from pits.

EOI#1714

There are 4 soil types in this parcel: Keithville very fine sandy loam, 2 – 5% slopes, Forbing silt loam, 3 – 8% slopes, Metcalf-Messer complex, and Writeville-Messer complex. Keithville very fine sandy loam comprises 47% and is located in the center of the tract. Forbing silt loam comprises 34% of the tract, Metcalf-Messer complex 11%, and Writeville-Messer complex 8%. Keithville very fine sandy loam can be found on marine terraces. Its parent material is loamy over clayey alluvium and it is moderately well drained with a high available water capacity (about 10.8 inches). Forbing silt loam can be found on stream terraces. Its parent material is clayey alluvium and it is moderately well drained with a moderate available water capacity (8.1 in.). Metcalf-Messer complex can be found on stream terraces. Its parent material is loamy alluvium over clayey residuum weathered from sandstone and shale. It is somewhat poorly drained with a high available water capacity (10.3 in.). Wrightville-Messer complex can be found in depressions. Its parent material is silty over clayey alluvium and it is poorly drained with a high available water capacity (11.3 in.).

EOI#1715

There are 3 soil types in this parcel: Woodtell fine sandy loam, 3 – 8% slopes, Keithville very fine sandy loam, 2 – 5% slopes, Guyton soils, frequently flooded. Woodtell fine sandy loam comprise 70% of the tract, Keithville very fine sandy loam 11%, and Guyton soils, 19%. Woodtell fine sandy loam can be found on interfluvies. Its parent material is residuum weathered from sandstone and shale in the Wilcox and Cook Mountain formations of the Eocene age. Keithville very fine sandy loam can be found on marine terraces. Its parent material is loamy over clayey alluvium and it is moderately well drained with a high available water capacity (about 10.8 inches). Guyton soils can be found on flats. Its parent material is loamy alluvium of the Holocene age. It is poorly drained with a high available water capacity (12.0 in.).

EOI#1716

There are 2 soil types on the northern parcel: Forbing silt loam, 3 – 8% slopes and Metcalf-Messer complex. Forbing silt loam comprises 55% of the tract and Metcalf-Messer complex 45%. Forbing silt loam can be found on stream terraces. Its parent material is clayey alluvium and it is moderately well drained with a moderate available water capacity (8.1 in.). Metcalf-

Messer complex can be found on stream terraces. Its parent material is loamy alluvium over clayey residuum weathered from sandstone and shale. It is somewhat poorly drained with a high available water capacity (10.3 in.).

There are 2 soil types in the southern parcel: Gore silt loam, 1 – 5% slopes and Metcalf-Messer complex. Gore silt loam comprises 92% of the tract and Metcalf-Messer complex 8%. Gore silt loam can be found on terraces. Its parent material is clayey alluvium and it is moderately well drained with a moderate available water capacity (7.3 in.). Metcalf-Messer complex can be found on stream terraces. Its parent material is loamy alluvium over clayey residuum weathered from sandstone and shale. It is somewhat poorly drained with a high available water capacity (10.3 in.).

Special Status Species

The following provides a list of rare plant and animal species and communities that have been identified in Rapides Parish, Louisiana by the Louisiana Natural Heritage Program (EOIs #1581 and #1711):

| Scientific Name | Common name | State Rank | Global Rank | State Status | Federal Status |
|--|--------------------------------|------------|-------------|--------------|----------------|
| <i>Aimophila aestivalis</i> | Bachman's Sparrow | S3 | G3 | | |
| <i>Bottomland hardwood forest</i> | Bottomland Hardwood Forest | S4 | G4G5 | | |
| <i>Camassia scilloides</i> | Atlantic Camas | S3 | G4G5 | | |
| <i>Carex meadii</i> | Mead's Sedge | S3 | G4G5 | | |
| <i>Cypress Swamp</i> | Cypress Swamp | S4 | G4G5 | | |
| <i>Cypress-Tupelo Swamp</i> | Cypress-Tupelo Swamp | S4 | G3G5 | | |
| <i>Cypripedium kentuckiense</i> | Southern Lady's-slipper | S1 | G3 | | |
| <i>Haliaeetus leucocephalus</i> | Bald Eagle | S2N, S3B | G5 | Endangered | Delisted |
| <i>Hardwood slope forest</i> | Hardwood slope forest | S3S4 | G2G3 | | |
| <i>Mixed hardwood loblolly forest</i> | Mixed hardwood loblolly forest | S4 | G3G4 | | |
| <i>Mustela frenata</i> | Long-tailed Weasel | S2S4 | G5 | | |
| <i>Oenothera pilosella ssp. Sessilis</i> | Meadow Evening Primrose | S1? | G5T2Q | | |
| <i>Picoides borealis</i> | Red-Cockaded Woodpecker | S2 | G3 | Endangered | LE |
| <i>Ratibidia pinnata</i> | Yellow Coneflower | S2? | G5 | | |
| <i>Small Stream Forest</i> | Small Stream Forest | S3 | G3 | | |
| <i>Triphora trianthophora</i> | Nodding Pagonia | S2 | G3G4 | | |
| <i>Waterbird Nesting Colony</i> | Waterbird Nesting Colony | SNR | GNR | | |
| <i>Amsonia ludoviciana</i> | Louisiana Blue Star | S3 | G3 | | |
| <i>Bayhead swamp</i> | Bayhead swamp | S3 | G3? | | |
| <i>Burmannia biflora</i> | Northern Burmannia | S3 | G4G5 | | |
| <i>Carex microdonta</i> | Little Tooth Sedge | S3 | G4 | | |
| <i>Chaetodipus hispidus</i> | Hispid Pocket Mouse | S2 | G5 | | |
| <i>Cycleptus elongates</i> | Blue Sucker | S2S3 | G3G4 | | |
| <i>Dichantheium strigosum</i> | Rough-hair Witchgrass | S2? | G5 | | |
| <i>Dryopteris ludoviciana</i> | Southern Shield Wood-fern | S2 | G4 | | |
| <i>Dulichium arundinaceum</i> | Three-way Sedge | S2 | G5 | | |
| <i>Euphorbia discoidalis</i> | Summer spurge | S1 | GNR | | |

| | | | | | |
|--|--|----------|-------|--------------------|----|
| <i>Faxonella creaseri</i> | Ouachita Fencing Crawfish | S2 | G2 | | |
| <i>Fleming Calcareous Prairie</i> | Fleming Calcareous Prairie | S1 | G1 | | |
| <i>Fleming glade</i> | Fleming glade | S1 | G1 | | |
| <i>Helmitheros vermivorus</i> | Worm eating Warbler | S4B | G5 | | |
| <i>Hexalectris spicata</i> | Crested Coral-root | S2 | G5 | | |
| <i>Lampsilis satura</i> | Sandbank Pocketbook | S2 | G2 | | |
| <i>Leuctra szezytkoi</i> | Schoolhouses Springs Leuctran Stonefly | S2 | G2 | | |
| <i>Lobelia flaccidifolia</i> | Coastal plain lobelia | S2? | G5 | | |
| <i>Macrolemys temminckii</i> | Alligator snapping turtle | S3 | G3G4 | Restricted harvest | |
| <i>Margaritifera hembeli</i> | Louisiana Pearlshell | S1 | G1 | Endangered | LT |
| <i>Mayaca fluviatilis</i> | Bog Moss | S2 | G5 | | |
| <i>Melanthera nivea</i> | Snow Melanthera | S2 | G5 | | |
| <i>Orconectes blacki</i> | Calcasieu Painted Crawfish | S2 | G2 | | |
| <i>Orconectes hathawayi</i> | Teche Painted Crawfish | S3 | G3 | | |
| <i>Oroconectes maletae</i> | Kisatchie Painted Crawfish | S2 | G2 | | |
| <i>Orobanche uniflora</i> | Broomrape | S1 | G5 | | |
| <i>Pandion haliaetus</i> | Osprey | S2B, S3N | G5 | | |
| <i>Pine flatwoods</i> | Pine flatwoods | S2 | G2G3 | | |
| <i>Pituophis ruthveni</i> | Louisiana Pine Snake | S2S3 | G2Q | | C |
| <i>Plethodon kisatchie</i> | Louisiana Slimy Salamander | S1S2 | G3G4Q | | |
| <i>Plethodon serratus</i> | Southern Red-backed Salamander | S1 | G5 | Prohibited | |
| <i>Pleurobema riddellii</i> | Louisiana Pigtoe | S1S2 | G1G2 | | |
| <i>Polyodon spathula</i> | Paddlefish | S3 | G4 | Prohibited | |
| <i>Procambarus jaculus</i> | Javelin Crawfish | S1S2 | G4 | | |
| <i>Pteronotropis hubbsi</i> | Bluehead Shiner | S2 | G3 | | |
| <i>Quercus rubra</i> | Red Oak | S1S3 | G5 | | |
| <i>Rhynchospora miliacea</i> | Millet Beakrush | S2 | G5 | | |
| <i>Rhynchospora scirpoides</i> | Long-beaked Baldrush | S3 | G4 | | |
| <i>Schisandra glabra</i> | Scarlet Woodbine | S3 | G3 | | |
| <i>Scirpus etuberculatus</i> | Bulrush | S1 | G3G4 | | |
| <i>Shortleaf pine/oak-hickory forest</i> | Shortleaf pine/oak-hickory forest | S2S3 | G2G3 | | |
| <i>Shrub swamp</i> | Shrub Swamp | S4 | GNR | | |
| <i>State champion tree</i> | State champion tree | SNR | GNR | | |
| <i>Strophitus subvexus</i> | Southern Creekmussel | S1 | G3 | | |
| <i>Strophitus undulates</i> | Squawfoot | S2 | G5 | | |
| <i>Western acidic longleaf pine savannah</i> | Western Acidic Longleaf Pine Savannah | S1S2 | G2G3 | | |
| <i>Western hillside seepage bog</i> | Western hillside seepage bog | S2 | G2G3 | | |
| <i>Western upland longleaf pine forest</i> | Western upland longleaf pine forest | S2S3 | G2G3 | | |

Source: Louisiana Natural Heritage Program, 2007.

Note: S1 = critically imperiled in Louisiana because of extreme rarity (5 or fewer known extant populations) or because of some factor(s) making it especially vulnerable to extirpation S2 = imperiled in Louisiana because of rarity (6 to 20 known extant populations) or because of some factor(s) making it very vulnerable to extirpation S3 = rare and local throughout the state or found locally (even abundantly at some of its locations) in a restricted region of the state, or because of other factors making it vulnerable to extirpation (21 to 100 known extant populations).

De-listed on June 28, 2007, the Bald Eagle continues to be protected under the Bald and Golden Eagle Protection Act of 1940 and the Migratory Bird Treaty Act. Bald Eagles typically build their nests in tall trees or cliffs that offer unrestricted flight patterns and visibility, within 1 to 2 miles of large water bodies. In Louisiana, the Bald Eagle nests primarily in southeastern coastal parishes, and is occasionally observed on large lakes in the northern or central parishes during the winter. There are several lakes < 0.5 miles north of EOI #1711 and the Red River is just outside the eastern boundary of the tract. Although there is no roosting habitat on the EOI itself that could support this species, it could be used for foraging habitat. EOI #1581 does not provide suitable foraging or preferred roosting habitat for Bald Eagles.

The red-cockaded woodpecker is both federally and state-listed as endangered. Appropriate habitat for the woodpecker includes mature pine forests and mixed pine-upland hardwood forest with little or no hardwood mid-story. The average cavity tree age ranges from 60 to 126 years for longleaf pine, 70 to 90 years for loblolly pine, and 75 to 149 years for shortleaf pine. The woodpeckers forage in habitat consisting of pine stands with an average DBH of 9 inches or greater, and in pole stands with 4 to 9 inches DBH. There are fewer than 400 known colonies of the red-cockaded woodpecker in Louisiana, most of which are in Kisatchie National Forest (LDWF, 2004a). These parcels do not have suitable habitat to support woodpecker colonies.

The Louisiana pearlshell is federally listed as endangered and state listed threatened. This is a severely declining species that can be found in small streams in central Louisiana. Some researchers report that the species is limited to 22 headwater streams in the Red River basin. There is the potential that this species could occur in small streams on the proposed tracts.

The following is a list of threatened, endangered, and special concern animal and plant species and communities documented in Caddo Parish, LA by the Louisiana Natural Heritage Program (EOI #1672, #1714, #1715, and #1716):

| Scientific Name | Common Name | State Rank | Global Rank | State Status | Federal Status |
|-----------------------------------|-----------------------------|------------|-------------|--------------|----------------|
| <i>Agalinis caddoensis</i> | Caddo Parish False-foxglove | SH | GH | | |
| <i>Ambystoma tigrinum</i> | Eastern Tiger Salamander | S1 | G5 | Prohibited | PS |
| <i>Ammocrypta clara</i> | Western Sand Darter | S2 | G3 | | |
| <i>Amorpha paniculata</i> | panicled indigobush | S2 | GNR | | |
| <i>Anemone berlandieri</i> | ten petal thimbleweed | S2 | G4? | | |
| <i>Astragalus soxmaniorum</i> | Soxman Milk-vetch | S2 | G3 | | |
| <i>Bassariscus astutus</i> | Ringtail | S? | G5 | | |
| <i>Bottomland hardwood forest</i> | Bottomland Hardwood Forest | S4 | G4G5 | | |
| <i>Burmannia biflora</i> | Northern Burmannia | S3 | G4G5 | | |
| <i>Callirhoe alcaeoides</i> | Clustered Poppy-mallow | S1 | G5? | | |
| <i>Callirhoe digitata</i> | wine cup | S1 | GNR | | |
| <i>Callirhoe involucrata</i> | purple poppymallow | SH | GNR | | |
| <i>Camassia scilloides</i> | Atlantic Camas | S3 | G4G5 | | |
| <i>Carex arkansana</i> | Arkansas sedge | S1 | G4 | | |
| <i>Carex decomposita</i> | Cypress-knee Sedge | S3 | G3 | | |
| <i>Carex meadii</i> | Mead's Sedge | S3 | G4G5 | | |
| <i>Ceanothus herbaceus</i> | Prairie Redroot | S1 | G5 | | |

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|--|--------------------------------|------|------|------------|----|
| <i>Cirsium engelmannii</i> | Cirsium Terraenigrae | SU | G4 | | |
| <i>Cooperia drummondii</i> | Evening Rainlily | S2 | G5 | | |
| <i>Coreopsis intermedia</i> | Golden Wave Tickseed | S2 | G3 | | |
| <i>Croton argyranthemus</i> | Silver Croton | S2 | G5 | | |
| <i>Cyperus grayoides</i> | An Umbrella-sedge | S3 | G3 | | |
| <i>Dalea phleoides</i> | Slim-spike Prairie-clover | S1 | G4 | | |
| <i>Dalea villosa var. grisea</i> | Prarie-clover | S2 | G5T4 | | |
| <i>Dodecatheon meadia</i> | Common Shooting-star | S2 | G5 | | |
| <i>Draba cuneifolia</i> | Wedge-leaf Whitlow-grass | S1 | G5 | | |
| <i>Dulichium arundinaceum</i> | Three-way Sedge | S2 | G5 | | |
| <i>Echinacea purpurea</i> | Purple Coneflower | S2 | G4 | | |
| <i>Eleocharis wolfii</i> | Wolf Spikerush | S3 | G3G4 | | |
| <i>Eriogonum longifolium</i> | Long-leaved Wild-buckwheat | S2 | G4 | PS | |
| <i>Eriogonum multiflorum</i> | Many-flowered Wild-buckwheat | S3 | G5 | | |
| <i>Erythronium albidum</i> | White Trout-lily | S2 | G5 | | |
| <i>Eumeces septentrionalis</i> | Southern Prairie Skink | S1 | G5 | | |
| <i>Forested seep</i> | Forested Seep | S3 | G3? | | |
| <i>Forestiera ligustrina</i> | Upland Swamp Privet | S3 | G4G5 | | |
| <i>Geocarpon minimum</i> | Earth-fruit | S2 | G2 | | |
| <i>Gratiola flava</i> | flame hedgehyssop | S1 | G4 | | |
| <i>Hardwood slope forest</i> | Hardwood Slope Forest | S3S4 | G2G3 | | |
| <i>Helianthemum rosmarinifolium</i> | rosemary rockrose | S2 | G4 | | |
| <i>Heuchera americana</i> | American Alumroot | S2 | G5 | | |
| <i>Isotria verticillata</i> | Large Whorled Pogonia | S3 | G5 | | |
| <i>Liatris tenuis</i> | Slender Gay-feather | S1 | G3 | | |
| <i>Lipocarpha micrantha</i> | small flower hemicarpha | SH | G5 | | |
| <i>Loeflingia squarrosa var. squarrosa</i> | Spreading Pygmyleaf | S1 | GNR | | |
| <i>Lyonia mariana</i> | Stagger-bush | S1 | G5 | | |
| <i>Marshallia caespitosa var. signata</i> | Barbara's Buttons | S1 | G4T4 | | |
| <i>Matelea cynanchoides</i> | Prairie Milkvine | S1 | G4G5 | | |
| <i>Minuartia drummondii</i> | Drummond's stitchwort | SRF | G5 | | |
| <i>Mirabilis albida</i> | Pale Umbrella-wort | S2 | G5 | | |
| <i>Mixed hardwood-loblolly forest</i> | Mixed Hardwood-loblolly Forest | S4 | G3G4 | | |
| <i>Monotropa hypopithys</i> | American Pinesap | S2 | G5 | | |
| <i>Morse clay calcareous prairie</i> | Morse Clay Calcareous Prairie | S1 | G1G2 | | |
| <i>Nemastylis geminiflora</i> | Prairie Pleat-leaf | S2S3 | G4 | | |
| <i>Panicum flexile</i> | Wiry Witchgrass | S2 | G5 | | |
| <i>Paronychia drummondii</i> | Drummond Nailwort | S2 | G4G5 | | |
| <i>Pediomelum digitatum</i> | Palm-leaf Scarf-pea | S1 | G5 | | |
| <i>Pediomelum hypogaeum var. subulatum</i> | Awl-shaped Scarf-pea | S2 | G5T4 | | |
| <i>Penstemon murrayanus</i> | Cupleaf Beardtongue | S1 | G4 | | |
| <i>Phacelia glabra</i> | smooth phacelia | S2 | GNR | | |
| <i>Phacelia strictiflora</i> | Phacelia | S2 | G5 | | |
| <i>Picoides borealis</i> | Red-cockaded Woodpecker | S2 | G3 | Endangered | LE |

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|---|-----------------------------------|------|-------|------------|-------|
| <i>Plantago patagonica</i> | Woolly Plantain | S2 | G5 | | |
| <i>Platanthera lacera</i> | Green-fringe Orchis | S1 | G5 | | |
| <i>Polygonella americana</i> | Southern Jointweed | S2 | G5 | | |
| <i>Polyodon spathula</i> | Paddlefish | S3 | G4 | Prohibited | |
| <i>Prunus gracilis</i> | Oklahoma Plum | S2 | G4G5 | | |
| <i>Pseudacris streckeri</i> | Strecker's Chorus Frog | S1 | G5 | | |
| <i>Quercus arkansana</i> | Arkansas Oak | S2 | G3 | | |
| <i>Quercus macrocarpa</i> | Burr Oak | S1 | G5 | | |
| <i>Quercus rubra</i> | Red Oak | S1S3 | G5 | | |
| <i>Ratibida pinnata</i> | Yellow Coneflower | S2? | G5 | | |
| <i>Reithrodontomys humulis</i> | Eastern Harvest Mouse | S3S4 | G5 | | |
| <i>Ribes curvatum</i> | Granite Gooseberry | S2 | G4 | | |
| <i>Saline prairie</i> | Saline Prairie | S1 | G1G2 | | |
| <i>Sanguinaria canadensis</i> | Bloodroot | S2 | G5 | | |
| <i>Schedonnardus paniculatus</i> | tumble grass | S1 | G5 | | |
| <i>Schoenolirion wrightii</i> | Texas Sunnysbell | S2 | G3 | | |
| <i>Scutellaria cardiophylla</i> | Heart-leaved Skullcap | S2 | G4? | | |
| <i>Sedum nuttallianum</i> | yellow stonecrop | S1 | GNR | | |
| <i>Selaginella arenicola ssp. riddellii</i> | Riddell's Spike Moss | S3 | G4T4 | | |
| <i>Shortleaf pine/oak-hickory forest</i> | Shortleaf Pine/oak-hickory Forest | S2S3 | G2G3 | | |
| <i>Silene stellata</i> | Starry Champion | S2 | G5 | | |
| <i>Sitta carolinensis</i> | White-breasted Nuthatch | S2 | G5 | | |
| <i>Small stream forest</i> | Small Stream Forest | S3 | G3 | | |
| <i>Solanum dimidiatum</i> | Western Horse-nettle | S2S3 | G5 | | |
| <i>Solidago auriculata</i> | Eared Goldenrod | S4 | G4 | | |
| <i>State champion tree</i> | State Champion Tree | SNR | GNR | | |
| <i>Sierna antillarum athalassos</i> | Interior Least Tern | S1B | G4T2Q | Endangered | PS:LE |
| <i>Streptanthus hyacinthoides</i> | Smooth Twistflower | S2 | G4 | | |
| <i>Symphytichum drummondii var. texanum</i> | Texas Aster | S1? | G5TNR | | |
| <i>Taenidia integerrima</i> | Yellow Pimpernell | S2 | G5 | | |
| <i>Talinum parviflorum</i> | Small-flowered Flame-flower | S3 | G5 | | |
| <i>Talinum rugospermum</i> | prairie flameflower | S1 | G3G4 | | |
| <i>Tetragonotheca ludoviciana</i> | Louisiana Square-head | S3 | G4 | | |
| <i>Thalictrum revolutum</i> | Windflower | S1 | G5 | | |
| <i>Thelesperma filifolium</i> | Thread-leaved Green-thread | S1 | G4G5 | | |
| <i>Trillium recurvatum</i> | Reflexed Trillium | S2 | G5 | | |
| <i>Trillium texanum</i> | Texas Trillium | S1 | G2G3Q | | |
| <i>Triosteum angustifolium</i> | Yellowleaf Tinker's-weed | S2 | G5 | | |
| <i>Triphora trianthophora</i> | Nodding Pogonia | S2 | G3G4 | | |
| <i>Uvularia sessilifolia</i> | Sessile-leaved Bellwort | S2 | G5 | | |

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|--|---------------------------------|------|------|--|--|
| <i>Viola pubescens</i> | Downy Yellow Violet | S1 | G5 | | |
| <i>Vireo gilvus</i> | Warbling Vireo | S1B | G5 | | |
| <i>Waterbird Nesting Colony</i> | Waterbird Nesting Colony | SNR | GNR | | |
| <i>Western xeric sandhill woodland</i> | Western Xeric Sandhill Woodland | S2S3 | G2G3 | | |
| <i>Zigadenus leimanthoides</i> | Death Camus | S1 | G4Q | | |
| <i>Zigadenus nuttallii</i> | Nuttall Death Camas | S1 | G5 | | |
| <i>Zornia bracteata</i> | Viperina | S2 | G5? | | |

None of these species were observed during the site visits.

Habitat for the red-cockaded woodpecker, as described above is not available on any of these tracts and therefore would not be present.

The interior least tern is federally and state listed as endangered. It breeds on sand bars of rivers and lakes. In Louisiana, the interior least tern nests on sand bars associated with the Mississippi River and the upper portion of the Red River. There are no documented winter records for this species in Louisiana (LDWF 2004a). There is potential for this species on the banks of Caddo Lake on EOIs #1714, #1715, and #1716. EOI #1672 does not contain suitable habitat for this species.

Migratory Bird Species of Concern

The following provides a list of migratory birds of conservation concern with the potential to occur on EOI #1711 or #1714 based on species preference for bottomland hardwood forests in all successional stages (Peterson 1980, Hamel 1992, and USFWS 2020). Because the nominated parcels have forests in several different successional stages, some of the species will have multiple suitability listings:

| Species | Habitat Suitability |
|-----------------------|-----------------------------|
| Little blue heron | Suitable, Optimal |
| Swallow-tailed kite | Marginal, Suitable, Optimal |
| Yellow Rail | Marginal |
| Red-headed woodpecker | Marginal, Suitable, Optimal |
| Wood thrush | Marginal, Optimal |
| Prairie warbler | Marginal |
| Cerulean warbler | Suitable |
| Prothonotary warbler | Suitable, Optimal |
| Worm-eating warbler | Marginal, Suitable |
| Swainson's warbler | Suitable, Optimal |
| Kentucky warbler | Marginal, Optimal |
| Louisiana waterthrush | Marginal |

The following provides a list of migratory birds with the potential to occur on EOIs #1581, 1714, 1715, and 1716 based on species preference for pine/mixed hardwood forests in all successional stages:

| Species | Habitat Suitability |
|------------------------------|-----------------------------|
| American swallow-tailed kite | Marginal |
| American kestrel | Marginal, Suitable, Optimal |
| Chuck-will's-widow | Suitable, Optimal |
| Red-headed woodpecker | Marginal |
| Brown-headed nuthatch | Marginal |
| Bewick's wren | Marginal |
| Wood thrush | Marginal, Suitable |
| Prairie warbler | Marginal, Optimal |
| Worm-eating warbler | Marginal |
| Kentucky warbler | Marginal |
| Louisiana waterthrush | Marginal |
| Bachman's sparrow | Marginal, Suitable |
| Smith's Longspur | Marginal |
| Harris's sparrow | Marginal |

No migratory bird species of concern are known to occur on the proposed tracts, although there is potential for use by several species.

Wildlife and Vegetation

EOI #1581

This 40 acre parcel is located < 3 miles southwest of the town of Lena and Interstate 49. A parish road runs east/west through the northern half of the tract. A gas pipeline runs east/west through the southeast corner. Carnaham Creek is located right outside of the northwest boundary of the tract. This Creek drains into Cane River which is a tributary to the Red River. Approximately 50% of the tract is cleared while the remainder contains a mixed hardwood/pine forest.

Dominant tree species include loblolly pine (*Pinus taeda*), southern red oak (*Quercus falcata*), white oak (*Q. alba*), red maple (*Acer rubrum*), and winged elm (*Ulmus alata*). Wildlife diversity is likely limited due to the amount of cleared land however common species are likely to occur including: white-tailed deer, southern short-tailed shrew (*Blarina caroliniensis*), big brown bat (*Eptesicus fuscus*), evening bat (*Nycticeius humeralis*), and golden mouse (*Ochrotomys nuttalli*). Bird species that likely occur on this tract include: chuck-will's-widow (*Caprimulgus carolinensis*), great crested flycatcher (*Myiarchus crinitus*), and Carolina chickadee (*Poecile carolinensis*). Reptile and amphibian species likely to occur include: southern leopard frog (*Rana utriculara*), northern cricket frog (*Acris crepitans crepitans*), southern copperhead (*Agkistrodon contortrix phaeogaster*), speckled kingsnake (*Lampropeltis getula holbrooki*), and box turtle (*Terrapene carolina triunguis*).

EOI #1672

This 40 acre tract is located <1 south of the town of Belcher and Highway 71. A gravel road runs north/south diagonally through the center of the tract. Several buildings are located in the northwest corner with 90% of the tract cleared land. A small patch (< 5 acres) of planted hardwood trees is located just south of the buildings. Cowhide Bayou is located < 0.5 miles west and the Red River is located < 1 mile east of the tract.

Wildlife is extremely limited on this tract due to the high percentage of cleared land. Some birds and insects might utilize the small patch of trees. Species that might occur include: American crow (*Corvus brachyrhynchos*) and blue jay (*Cyanocitta cristata*).

EOI #1711

EOI #1711 consists of 22.16 acres and is located < 5 miles south of Alexandria. The tract is located on the bank of the Red River and is less than 2 miles east of Highway 1. A levee runs north/south through the middle and a parish road runs north/south through the east corner of the tract. Approximately 80% of the tract is cleared and consists of a grass pasture. The tract contains two strips of mixed hardwoods that surround areas that are wet for portions of the year.

Dominant tree species include: water oak (*Q. nigra*), willow oak (*Q. phellos*), sugar berry (*Celtis laevigata*), and cow oak (*Q. michauxii*). Wildlife is likely limited due to the high percentage of cleared land however the strips of hardwoods and wet environment creates habitat for some species including: red-bellied woodpecker (*Melanerpes carolinus*), hairy woodpecker (*Picoides villosus*), tufted titmice (*Baeolophus bicolor*), scarlet tanager (*Piranga olivacea*), Fowler's toad (*Bufo fowleri*), common five-lined skink (*Eumeces fasciatus*), and buttermilk racer (*Coluber constrictor anthicus*).

EOI#1714

This 91.56 acre parcel is located ~ 5 miles west of the town of Mooringsport and Highway 169. A parish road runs east/west through the southern portion and 2 private roads run north/south through the center of the tract. There are several houses with ~ 65% of the tract cleared. The southern quarter of the tract contains a mixed hardwood/pine forest. Two intermittent creeks run through this area and the entire quarter is within a floodplain. This tract is located on the southern bank of Caddo Lake.

Dominant tree species include willow oak, black willow (*Salix nigra*), white oak, pecan (*Carya illinoensis*), yaupon (*Ilex yaupon*), red cedar (*Juniperus virginiana*), sweetgum (*Taxodium distichum*), loblolly pine, and water oak. Wildlife likely to occur includes: white-tailed deer, northern raccoon (*Procyon lotor*), nine-banded armadillo (*Dasypus novemcinctus*), red bat (*Lasiurus borealis*), and swamp rabbit (*Sylvilagus aquaticus*). Bird species that could occur include: bachman's warbler (*Vermivora bachmanii*), red-shouldered hawk (*Buteo lineatus*), and barred owl (*Strix varia*). Amphibians and reptiles that likely occur are: marbled salamander (*Ambystoma opacum*), southern dusky salamander (*Desmognathus auriculatus*), river cooter (*Pseudemys consinna*), red-eared slider (*Trachemys scripta elegans*), yellow-bellied water snake (*Nerodia erythrogaster flavigaster*), and diamondback water snake (*Nerodia rhombifer rhombifer*).

EOI#1715

EOI #1715 consists of 9.12 acres and is located < 0.5 miles from the town of Mooringsport, Highway 169 and Caddo Lake. A road runs through the southern corner and there are several buildings on the tract. The parcel is located within a floodplain and ~ 90% consists of a mixed hardwood/pine forest.

Dominant tree species include: loblolly pine, water oak, and willow oak. Wildlife likely to occur includes: white-tailed deer, northern raccoon, evening bat, flying squirrel (*Glaucomys volans*), barred owl, whip poor-will (*Caprimulgus vociferous*), blue jay, tufted titmouse, southern leopard frog, southern copperhead, and speckled kingsnake (*Lampropeltis getula holbrooki*),

EOI#1716

EOI #1716 consists of 2 separate tracts totaling 28.08 acres located less than 0.5 miles from one another. They both border Buzzard Bay in Caddo Lake. It is located < 1 mile west of EOI #1714. A road runs east/west on the northern boundary of the northern tract. There are several houses on both tracts although ~ 80% of the parcels consist of a mixed hardwood/pine forest.

Dominant tree species on the northern tract include willow oak, water oak, loblolly pine, sugar berry, southern red oak and eastern red cedar. Dominant tree species for the southern tract include water oak, live oak (*Q. virginiana*), sweetgum (*Liquidambar styracflua*), and loblolly pine. Due to the close proximity to the Lake, wildlife diversity is probably high for these two tracts. Mammals likely to occur on these tracts include: least shrew, Seminole bat (*Lasiurus seminolus*), Eastern woodrat (*Neotoma floridana*), and swamp rabbit. Bird species that could occur include: swallow-tailed kite (*Elanoides forficatus*), Mississippi kite (*Ictinia mississippiensis*), bachman's warbler, red-shouldered hawk, yellow-billed cuckoo (*Coccyzus americanus*), and barred owl. Amphibians and reptiles that likely occur are: marbled salamander (*Ambystoma opacum*), southern dusky salamander (*Desmognathus auriculatus*), eastern cricket frog (*Acris crepitans crepitans*), river cooter, red-eared slider, yellow-bellied water snake, and diamondback water snake.

Wastes, Hazardous or Solid

During the on site inspections, no hazardous or solid waste disposal site were found on the lease tracts.

Water Quality, Surface/Ground

Surface Water Quality

The most frequently cited suspected causes of impairment for all water bodies combined in Louisiana are fecal coliforms, primarily from septic tanks and municipal sewage treatment systems; low dissolved oxygen from sewage, agriculture, or natural causes; sediment-related problems such as turbidity, suspended solids, and siltation caused by agriculture, forestry, sewage systems, construction, hydro-modification, resource extraction, or natural processes; and mercury related to fish consumption advisories, due primarily to atmospheric deposition of mercury on the watershed. Many of the suspected sources of water quality impairment are known collectively as nonpoint source pollution because it typically does not come from a single

point of discharge but runs across the land when it rains and is carried through small canals and streams to major water bodies (LDEQ 2008).

Many of Louisiana's water bodies remain impaired for the designated use of fish and wildlife propagation. This is largely because there are many possible causes and sources of impairment impacting this use, and any one of these causes can result in a water body being considered impaired for fish and wildlife propagation. There are more than 30 different suspected causes of impairment reported as impacting fish and wildlife propagation. With the exception of mercury, all of the top eight suspected causes of impairment generally can be related to nonpoint sources of pollution. The remaining causes of impairment generally are related to various forms of industry, small business, or municipal sources (LDEQ 2008)

Ground Water Quality

The results of the Baseline Monitoring Program indicate that water quality is good in Louisiana aquifers. Although the overall quality of the state's ground water is good, there are more than 200 sites where active investigation or remediation of contaminated ground water is taking place, not including underground storage tank or Superfund sites. There also were 14 public water supply systems impacted by VOC contamination of ground water between 1989 and 2002 (GWPC 2009b).

The proposed sites are located within the Mississippi embayment aquifer system which consists of 6 aquifers that crop out as an arcuate band of poorly consolidated to unconsolidated, bedded sand, silt and clay. Geologic units of the aquifer system range from Late Cretaceous to middle Eocene in age. These tracts are located within the Middle Claiborne aquifer. Aquifers of the Mississippi embayment aquifer system consist of an interbedded sequence of poorly consolidated fluvial, deltaic, and marine deposits in which diagenesis or postdepositional geochemical processes have not greatly altered the original pattern of permeability. The hydraulic conductivity of the unconsolidated to poorly consolidated sediments that compose the aquifers of the Mississippi embayment aquifer system does not appear to have been greatly reduced by cementation or compactions. Consequently, the distribution of hydraulic conductivity and transmissivity of the Mississippi embayment aquifer system can be inferred from maps of sediment lithofacies, if a direct correlation between sediment type and aquifer permeability is assumed.

Wetlands/Riparian Areas/Floodplains

Carnaham Creek is located right outside of the northwest boundary of EOI #1581. This Creek drains into Cane River which is a tributary to the Red River. EOI #1711 is located on the bank of the Red River. EOIs #1714, 1715, and 1716 are on the bank of Caddo Lake.

Energy Policy

The area contains no features related to energy development, production, supply or distribution.

Ch. 4 - ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES

Introduction

This chapter assesses potential environmental consequences associated with direct, indirect, and cumulative effects of the Proposed Action and alternatives.

Based on review of the elements listed on the JFO NEPA Form and consideration of the Purpose and Need statement prepared for this EA, the following elements will be addressed in this EA: Air Quality, Environmental Justice, Cultural Resources, Native American Religious Concerns, Invasive/Exotic Species, Soils, Special Status Species, Migratory Birds of Concern, Wildlife and Vegetation, Wastes, Hazardous or Solid, Water Quality, Surface/Ground, Wetland/Riparian Areas/Floodplains, and Energy Policy.

Air Quality

If the lease is developed for oil and gas production, impacts to air quality associated with construction, drilling, production and abandonment could come from the following sources: (1.) fugitive dust generated from vehicle traffic along dirt or gravel roads during transportation of employees and equipment; (2.) exhaust from heavy machinery, vehicles, compressors, drilling rig prime movers, generators, and other internal combustion engines used during site construction, drilling, flowline installation, production, and abandonment and other production equipment such as pumps, separators, heater treaters, boilers; and (3.) fugitive VOC escaping from leaky pipe valves, flanges, and storage tanks during loading of crude on to tank trucks, and accidental releases/spills of hydrocarbons.

Fugitive dust created during road, drill pad, flowline construction, and abandonment would increase suspended particulates in the air. Also, the regulated air pollutants nitrogen oxides (NO_x), sulfur oxides (SO_x), VOC, and particulates (Pm) will be emitted from the above referenced sources. These conditions could temporarily impact the ambient air quality in the immediate vicinity of the leased area. The generation of suspended particulates, a regulated pollutant, could cause a temporary and localized disturbance to people who work in the area. However, the impacts from the combined frequency and volume of fugitive dust and regulated air pollutants are expected to be minimal, very localized, and of short duration.

Environmental Justice

There is no adverse human health and environmental effects anticipated from potential development on minority and low-income populations in the areas surrounding this tract.

Cultural Resources and Native American Religious Concerns

Cultural resource surveys have not been conducted, therefore direct and indirect impacts may occur to cultural resources or to a potentially sacred Native American religious site if there is ground disturbance. Direct impacts are those such as completely destroying a site by bulldozing

the area and workers picking up artifacts. Indirect impacts are those such as erosion or compaction of the soil on the site. However, if sites are located and recorded before ground disturbance begins, these impacts can be avoided or mitigated. A stipulation regarding cultural resources and Native American religious concerns applies to this lease (Appendix B) and is applicable for all the proposed parcels. The stipulation states that the BLM will not approve any ground disturbing activities that may affect historic properties and/or resources until it completes its obligations under applicable requirements of the National Historic Preservation Act and other authorities. If currently unknown burial sites are discovered during development activities associated with this lease, these activities must cease immediately, applicable law on unknown burials will be followed and, if necessary, consultation with the appropriate tribe/group of federally recognized Native Americans will take place.

Invasive/Exotic Species

Surface disturbing activities have the potential to introduce or promote the spread of invasive, nonnative plant species. Impacts are dependent on the species planted during restoration activities and the management of the site during and following restoration. Revegetating areas after soil disturbance with competitive grasses greatly reduces the ability for invasive species to take hold in an area. The Natural Resources Conservation Service recommends the mixture below for revegetation efforts in Louisiana:

Blend #1 LA (weight in pure live seed or PLS lb/ac)

- Switchgrass 60% = 2.4 lb
- IL Bundleflower 20% = 2.4 lb
- Partridge Pea 15% = 1.2 lb
- Black-eyed Susan 3% = .03 lb
- Plains Coreopsis 2% = .02 lb

A lease notice regarding invasive/exotic species applies to this lease (Appendix B) and is applicable for all of the proposed parcels. The lease notice states that the use of native or non-invasive plants in seeding mixtures will be encouraged to stabilize disturbed areas and during restoration activities. Construction sites will be surveyed for invasive species prior to ground disturbance. If invasive species are found, the proper control measures will be used to either eradicate the species from the area or minimize its spread to other areas.

Soils

Well site and access road construction would have direct impacts to soils. These impacts would be limited to those areas where vegetation is removed and construction occurs. The direct impacts would be of two types: (1) physical removal, leveling and mixing of surface soils and (2) soil compaction. The first impact would be caused by site preparation for construction of the well pad, related structures, road construction, flowline construction and wind and water erosion after vegetation is removed. This would cause a mixing of soil horizons and cause a short term loss of soil productivity. The second impact, soil compaction, would be caused by vehicle and machinery travel. Compaction decreases air and water infiltration into the soil profile thus reducing soil productivity. The indirect impact would be that of erosion and siltation of drainages

and streams. Prompt cultivation and re-vegetation of impacted soil areas should reduce the possibility of soil erosion thus preventing an increase of siltation into drainages or streams from run-off. Site specific conditions of approval would be developed prior to approval of an APD to address soil erosion.

Special Status Species

There is foraging habitat potential for the bald eagle on EOI #1711. BLM has concluded that the proposed lease “may affect, but is not likely to adversely affect” the bald eagle. Consultation with U.S. Fish and Wildlife Service, Louisiana Ecological Services (FWS) occurred on 12/13/12. FWS concurred with BLM’s finding that the proposed lease “may affect but is not likely to adversely affect” the bald eagle (Appendix C). BLM also consulted with Louisiana Natural Heritage Program (LNHP) on 12/13/12. LNHP concurred with BLM’s findings (Appendix C). Although effects from the proposed leases are not likely for the bald eagle, stipulations and lease notices regarding bald eagles apply to this proposal, due to potential future changes in species habits, habitat, and range and changes in our knowledge thereof. The stipulation states that no surface occupancy or disturbance will be permitted within a 660-foot buffer zone (1,500-foot buffer zone in LA) around active or inactive bald eagle nests and communal roost sites to avoid impact to nesting eagles, including impact to courtship and nesting behavior, egg laying and incubation, and feeding and fledging activity. Also, BLM-permitted projects will not remove trees suitable for nesting within a 0.5-mile buffer zone around active or inactive bald eagle nests and communal roost sites to protect foraging habitat, promote nest fidelity, and maintain habitat integrity around bald eagle nests and communal roosting sites.

There is potential for the Louisiana pearlshell to occur in small streams on EOIs #1711 and 1581. BLM has concluded that the proposed leases “may affect, but is not likely to adversely affect” the Louisiana pearlshell. FWS and LNHP concurred with BLM’s finding that the proposed leases “may affect but is not likely to adversely affect” the Louisiana pearlshell.

There is potential for the Interior least tern to occur on the banks of Caddo Lake on EOIs #1714, #1715, and #1716. BLM has concluded that the proposed leases “may affect, but is not likely to adversely affect” the interior least tern. FWS and LNHP concurred with BLM’s finding that the proposed leases “may affect but is not likely to adversely affect” the interior least tern. Although effects from the proposed leases are not likely for the interior least tern, stipulations and lease notices regarding interior least tern apply to this proposal, due to potential future changes in species habits, habitat, and range and changes in our knowledge thereof. The stipulation is a seasonal limitation which states that there will be no surface disturbance within a 650 foot buffer (LA) and 1,000foot buffer (AR and KY) from sandbars on the Mississippi, Ohio, Arkansas, and Red Rivers during interior least tern nesting season (May 15-August 31), to protect interior least tern nesting and feeding habitat.

Approval of the proposed leases does not in itself authorize any ground disturbance. If there is any future ground disturbance activities, the lessee will be required to submit an Application for Permit to Drill (APD). Additional consultation with FWS will occur at this time, if necessary. Stipulations and lease notices regarding rare species apply to this proposal. The stipulation states that the BLM may recommend modifications to exploration and development proposals to

further the conservation and management objectives for threatened, endangered, or other special status plant or animal species or their habitat to avoid BLM-approved activity that would contribute to a need to list such a species or their habitat. The lease notice gives recommendations for disposing produced water in such a way as to protect aquatic habitats for and to avoid potential impacts to special status fish, mussels, turtles, snails, plants, and migratory birds.

To protect threatened, endangered, candidate, proposed, and BLM sensitive plant species a second stipulation applies to this lease and applies to all proposed parcels. The stipulation states that all suitable special status plant species habitat will be identified during environmental review of any proposed surface use activity. If field examination indicates that habitat of one or more of these species is present, the BLM will require a survey by a qualified botanist for special status plants during periods appropriate to each species. Operations will not be allowed in areas where sensitive plants would be affected.

Migratory Bird Species of Concern

The lists of migratory birds that have the potential to occur on the proposed tracts are based on the presence of bottomland hardwood forests in all successional stages for EOI #1711 and 1714 and mixed pine/hardwood forests for EOI #1581, 1714, 1715, and 1716. Nesting and foraging habitat for birds will be altered dramatically if forests are cut for oil and gas development. Many of the species with the potential to occur on these tracts could move to similar habitats in surrounding areas. After the wells are put into production and during reclamation activities bird species diversity would be altered depending on successional stage of the site and adequacy of restoration efforts.

To protect perch and roosting sites and terrestrial habitats for and to avoid potential impacts to migratory birds and federally listed wildlife a lease notice applies to this lease and applies to all proposed parcels. The lease notice provides recommendations regarding reserve pits, maximum design speeds for roads, and powerline construction to minimize effects on migratory birds.

Wildlife and Vegetation

The Reasonable Foreseeable Development Scenario (RFD) for EOI # 1581 predicts that 1 federal well will be drilled from 1 pad. The total disturbance predicted would be 6.51 acres, with 5.74 acres disturbed for the well pad and pit, 1.23 acres for the access road, and 0.46 acres reclaimed. The RFD for EOI # 1672 predicts that multiple wells will be drilled horizontally from 1 drilling pad. The total disturbance predicted would be 5.95 acres, with 5.74 acres disturbed for the well pad and pit, 0.55 acres for the access road, and 0.34 acres reclaimed. The RFD for EOI # 1711 predicts that 4 wells will be drilled from 1 pad. The total disturbance predicted would be 6.08 acres, with 5.74 acres disturbed for the well pad and pit, 0.68 acres for the access road, and 0.34 acres reclaimed. The RFD for EOI # 1714 predicts that multiple wells will be horizontally drilled from 1 pad. The total disturbance predicted would be 6.43 acres, with 5.74 acres disturbed for the well pad and pit, 1.03 acres for the access road, and 0.34 acres reclaimed. The RFD for EOI # 1715 predicts that multiple wells will be horizontally drilled from 1 pad. The total disturbance predicted would be 6.23 acres, with 5.74 acres disturbed for the well pad and pit, 0.83 acres for

the access road, and 0.34 acres reclaimed. The RFD for EOI # 1716 predicts that multiple wells will be horizontally drilled from 1 pad. The total disturbance predicted would be 5.74 acres, with 5.74 acres disturbed for the well pad and pit, 0.34 acres for the access road, and 0.34 acres reclaimed (Appendix D).

Many of the species expected to occur on these sites have broad habitat requirements and would continue to be found in a variety of habitats in the surrounding areas. Wildlife use of the sites after wells are put into production would vary depending on vegetation and succession stage. Once put into production, well pads would be reduced in size and reserve pits would be graded and seeded. The producing well sites would be subject to regular maintenance and inspection. Wildlife use of sites is dependent on the adequacy of restoration. However, over the life of the wells, some of the acreage would be excluded from utilization by most wildlife species.

Wastes, Hazardous or Solid

The operations would typically generate the following wastes; (a) discharge of drilling fluids and cuttings into the reserve pits; (b) wastes generated from used lubrication oils, hydraulic fluids, and other fluids used during production of oil and gas, some of which may be characteristic or listed hazardous waste; and (c) service company wastes from exploration and production activities as well as containment of some general trash. Certain wastes unique to the exploration, development, and production of crude oil and natural gas have been exempted from Federal Regulations as hazardous waste under Subtitle C of the Resource Conservation and Recovery Act (RCRA) of 1976. The exempt waste must be intrinsic to exploration, development or production activities and is not generated as part of a transportation or manufacturing operation. The drilling fluids, drill cuttings, and produced waters are classified as a RCRA exempt waste, and the proposed action would not introduce hazardous substances into the environment if they are managed and disposed of properly under Federal, State, and local waste management regulations and guidelines.

Water Quality, Surface/Ground

Construction would cause some minor erosion and re-deposition of soil a short distance away from the construction area. Due to the topography within and around these parcels, Black Lake and the surrounding wetlands could serve as an accumulation point for surface runoff, re-deposited sediments via erosion, and developmental effluent. Site specific conditions of approval would be developed prior to approval of an APD to protect surface water quality. This may include but is not limited to construction of ditches, berms, terraces or other similar structures. Areas not needed for production would be reclaimed and stabilized to control erosion.

Improper casing and/or cementation can result in contamination of ground water aquifers. The BLM requires that the operator must isolate freshwater-bearing formations and other usable water containing 10,000 ppm or less of total dissolved solids (TDS) and other mineral-bearing formations and protect them from contamination by using proper casings. In addition, the BLM requires lining the reserve and water pit with a suitable liner on a case-by-case basis.

Wetlands/Riparian Areas/Floodplains

No disturbance would be permitted within 250 feet of streams, rivers, wetlands or springs. Because EOI #1711 is located on the bank of the Red River and EOI # 1714, 1715, and 1716 are located on the bank of Caddo Lake, the majority of each of these parcels would not allow surface occupancy.

No Action

Under this alternative, the parcels within the proposed action would remain unleased at this point in time. It could be offered for leasing in the future, but may be subject to additional environmental analysis at that point in time. If the parcels were not leased there would be no direct impacts to the potential drill location and therefore no effects on all of the critical elements above except Cultural Resources and Native American Religious Concerns (see below). As compared to the proposed action, there would be less disturbance resulting from oil and gas related actions.

Cultural Resources

If the area is not leased and cultural resource surveys are not conducted, direct and indirect impacts may occur. Direct impacts are those such as completely destroying a site by “relic hunters” or by people picking up artifacts. Other direct impacts may be the mixing of layers in a site by plowing or the destruction of a site by land leveling. Indirect impacts are those such as after timber thinning or clear-cutting erosion of the remains of a site. Hunting activities may cause other impacts to the surface such as the deposition of spent ammunition shells and other items. However, the use of the property is the purview of the land owner, and any cultural resource site and its artifacts are the property of the land owner.

Native American Religious Concerns

Under this alternative, places of Native American Religious Practice could be impacted by activities of the landowner, unless there was a formal agreement between the landowner and the Native American tribe. Direct impacts could be the destruction of a site, and an indirect impact could be the landowner placing a fee on the use of the area.

Cumulative Impacts

Cumulative impacts are the impacts to the environment which result from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions. Since the proposed action would not authorize surface occupancy, no environmental impacts are anticipated on the lease. Hence, the proposed action will not contribute to the impacts to other past, present, or reasonable foreseeable actions. For Cultural Resources and Native American Religious Concerns this is dependent upon cultural resource surveys being conducted.

Energy Policy

Energy Policy Act of 2005 – Sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) Indian energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

Title III: Oil and Gas

Subtitle B: Natural Gas

(Sec. 313) Designates FERC as the lead agency for coordinating federal permits and other authorizations and compliance with the National Environmental Policy Act of 1969 (NEPA). Directs FERC to establish a schedule for all federal authorizations.

Subtitle C: Production

(Sec. 322) Amends the Safe Drinking Water Act to exclude from the definition of underground injection the underground injection of fluids or propping agents (other than diesel fuels) pursuant to hydraulic fracturing operations related to oil or gas, or geothermal production activities.

Subtitle F: Access to Federal Lands

(Sec. 361) Requires the Secretary of the Interior to perform an internal review of current federal onshore oil and gas leasing and permitting practices.

(Sec. 364) Amends the Energy Act of 2000 to revise the requirement that the Secretary of the Interior, when inventorying all onshore federal lands, identify impediments or restrictions upon oil and gas development.

(Sec. 366) Amends the Mineral Leasing Act to set deadlines for an expedited permit application process.

(Sec. 368) Prescribes guidelines governing energy right-of-way corridors on federal land. Directs the Secretaries of Agriculture, of Commerce, of Defense, of Energy, and of the Interior (the Secretaries), in consultation with FERC, states, tribal or local government entities, affected utility industries, and other interested persons, are directed to consult with each other and to: (1) designate corridors for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities on federal land in the 11 contiguous Western States; (2) incorporate the designated corridors into the relevant energy land use and resource management or equivalent plans; and (3) ensure that additional corridors are promptly identified and designated.

(Sec. 371) Amends the Mineral Leasing Act to cite conditions for the reinstatement of oil and gas leases terminated for certain failure to pay rentals.

Subtitle G: Miscellaneous

(Sec. 390) States that action by the Secretary of the Interior in managing the public lands, or the Secretary of Agriculture in managing National Forest System Lands, with respect to certain oil or gas drilling related activities shall be subject to rebuttable presumption that the use of a categorical exclusion under NEPA would apply if the activity is conducted pursuant to the Mineral Leasing Act for the purpose of exploration or development of oil or gas.

CH. 5 - LIST OF AGENCIES AND PERSONS CONSULTED:

The following agencies/tribes were contacted (Appendix C):

U.S. Fish and Wildlife Service, Louisiana Ecological Services
Louisiana Natural Heritage Program
Louisiana State Historic Preservation Officer
Tunica-Biloxi Tribe
Caddo Indian Tribe
Chickasaw Nation
Alabama Coushatta Tribe
Coushatta Tribe
Chitimacha Tribe of Louisiana
Alabama-Quassarte Tribal Town
Muscogee (Creek) Nation of Oklahoma
Thlopthlocco Tribal Town
Choctaw Nation of Oklahoma
Mississippi Band of Choctaw
Quapaw Tribe of Oklahoma

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- Hamel, P. 1992. The Land Manager's Guide to the Birds of the South.
- Peterson, R. 1980. Birds of Eastern and Central North America.
- USDA, United States Department of Agriculture. 2007. Nonindigenous Species List – Louisiana. Southeast Ecological Science Center.
- USFWS, U.S. Fish and Wildlife Service. 2002. Birds of Conservation Concern.

List of Preparers

Specialist Name

Alison McCartney
John Sullivan
Gary Taylor

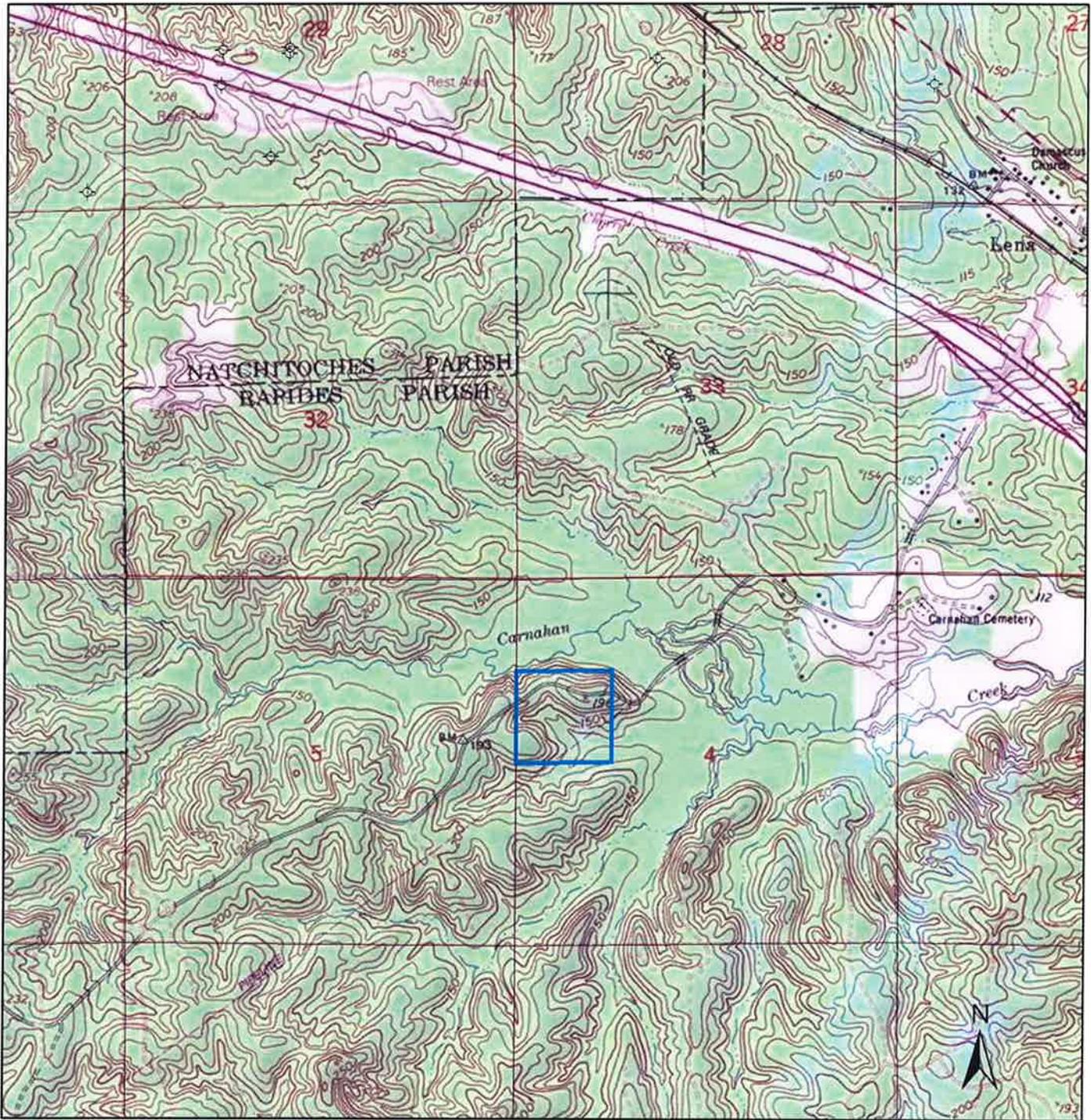
Title, Organization

Natural Resource Specialist
Archaeologist
Planning and Environmental Coordinator

APPENDIX A

Proposed Lease Tract Locations

Proposed Federal Oil and Gas Lease
EOI 1581



2,000 1,000 0 2,000 4,000 6,000 Feet

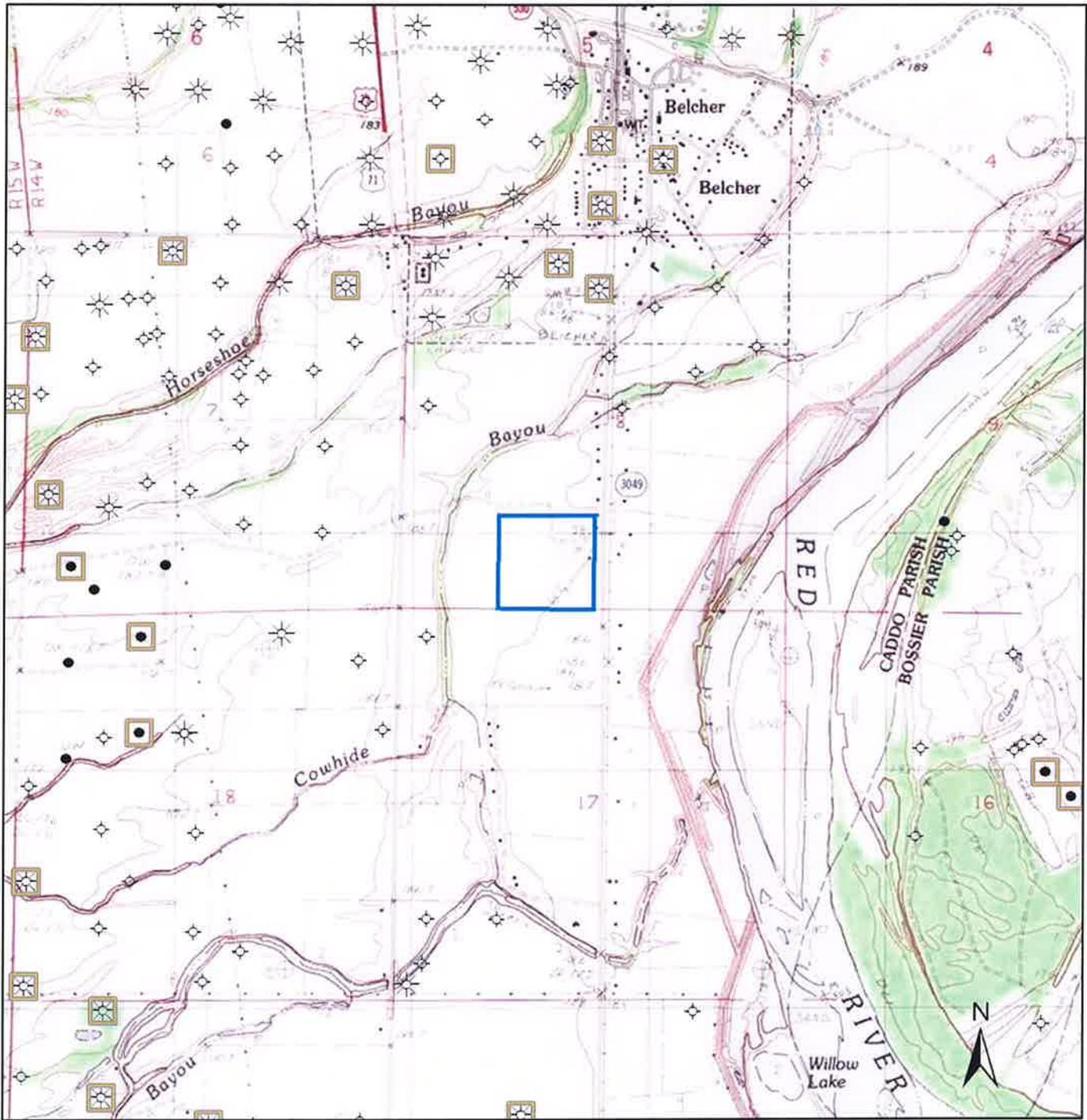
 Proposed Lease Area
 Oil and Gas Wells
 Dry Hole. Temporarily Abandoned

Proposed Lease Area:
 Rapides Parish, Louisiana, Louisiana Meridian
 T. 5N., R. 4W., Sec. 4, SWNW
 Approximately 38.02 acres.

U.S. Department of the Interior
 Bureau of Land Management
 Eastern States
 Southeastern States Field Office
 Jackson, Mississippi

This map contains portions of the following USGS 1:24,000 Topographic Quadrangle: Lena
 No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or
 completeness of this data for individual use or aggregate use with other data.

Proposed Federal Oil and Gas Lease
EOI 1672



2,000 1,000 0 2,000 4,000 6,000 Feet

Proposed Lease Area

Oil and Gas Wells

- ◊ Dry Hole, Temporarily Abandoned
- Oil Well
- ☼ Gas Well
- ◻ Inactive Wells

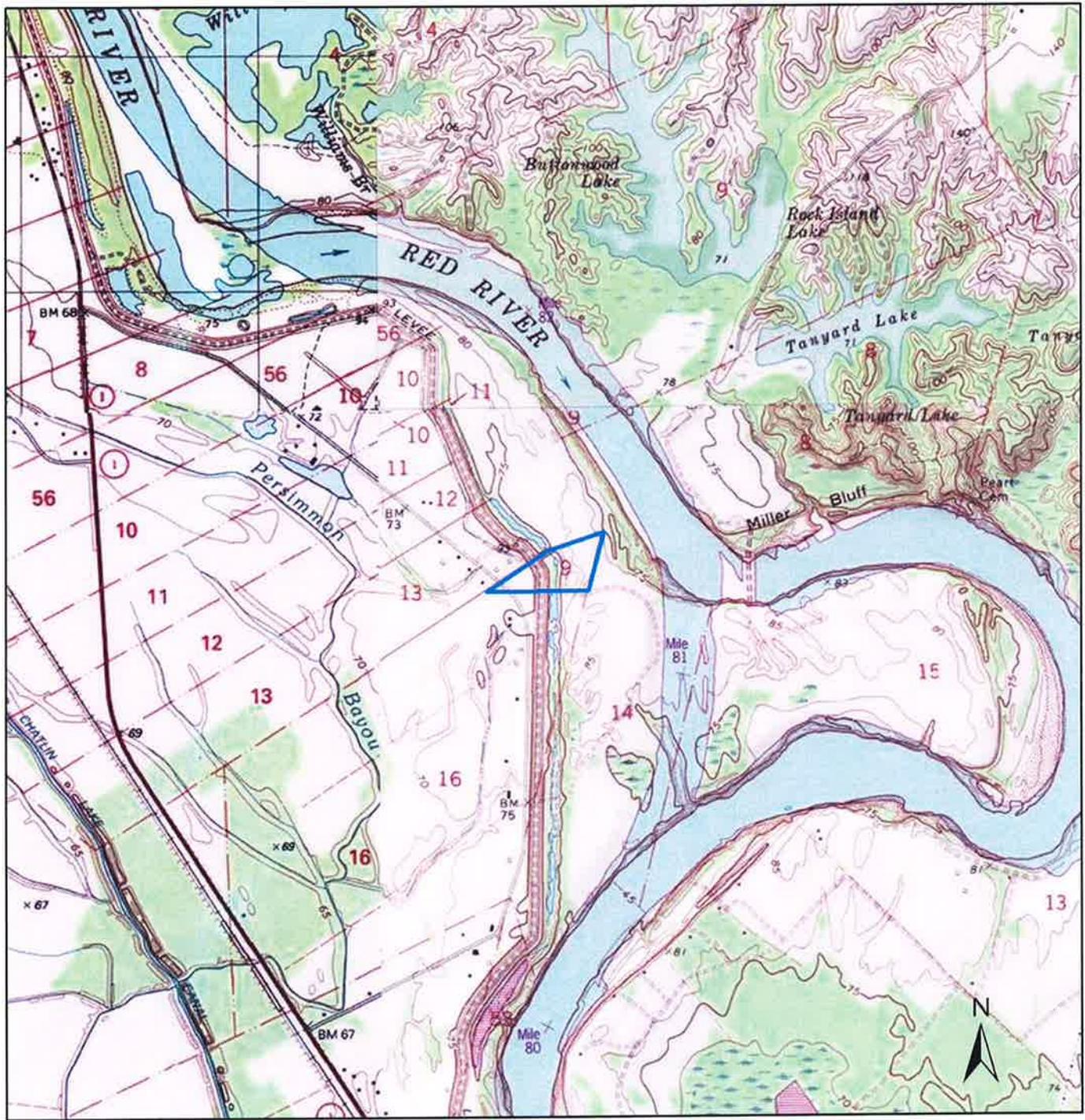
Proposed Lease Area:
Caddo Parish, Louisiana, Louisiana Meridian
T. 20N., R. 14W., Sec. 8, SESW
Approximately 39.88 acres.

U.S. Department of the Interior
Bureau of Land Management
Eastern States, Jackson Field Office
Jackson, Mississippi

This map contains portions of the following USGS 1:24,000 Topographic Ouadrangles: Gilliam, Dix

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

Proposed Federal Oil and Gas Lease
EOI 1711



2,000 1,000 0 2,000 4,000 6,000 Feet

 Proposed Lease Area

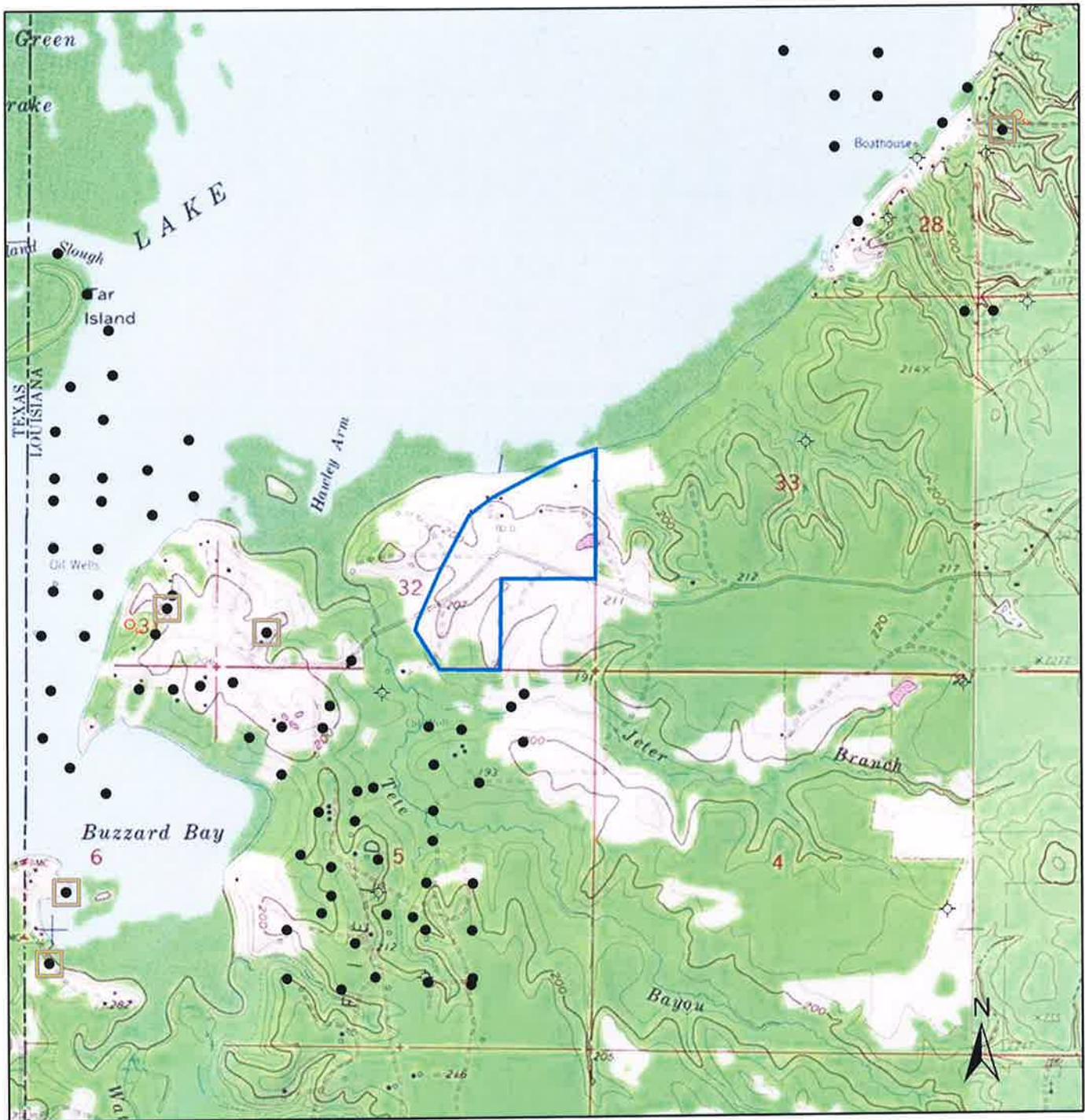
Proposed Lease Area:
Rapides Parish, Louisiana, Louisiana Meridian
T. 3N., R. 1E., Sec.9, Entire section
Approximately 22.16 acres.

U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi

This map contains portions of the following USGS 1:24,000 Topographic Quadrangles: Latanier, Woodworth East, Alexandria, Libuse

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

Proposed Federal Oil and Gas Lease
EOI 1714



Proposed Lease Area
 Proposed Lease Area

Oil and Gas Wells

- Dry Hole, Temporarily Abandoned
- Oil Well
- Inj. Srv. CO2, Storage, WDW, Pseudo Orig, Mining Borhole
- Inactive Wells

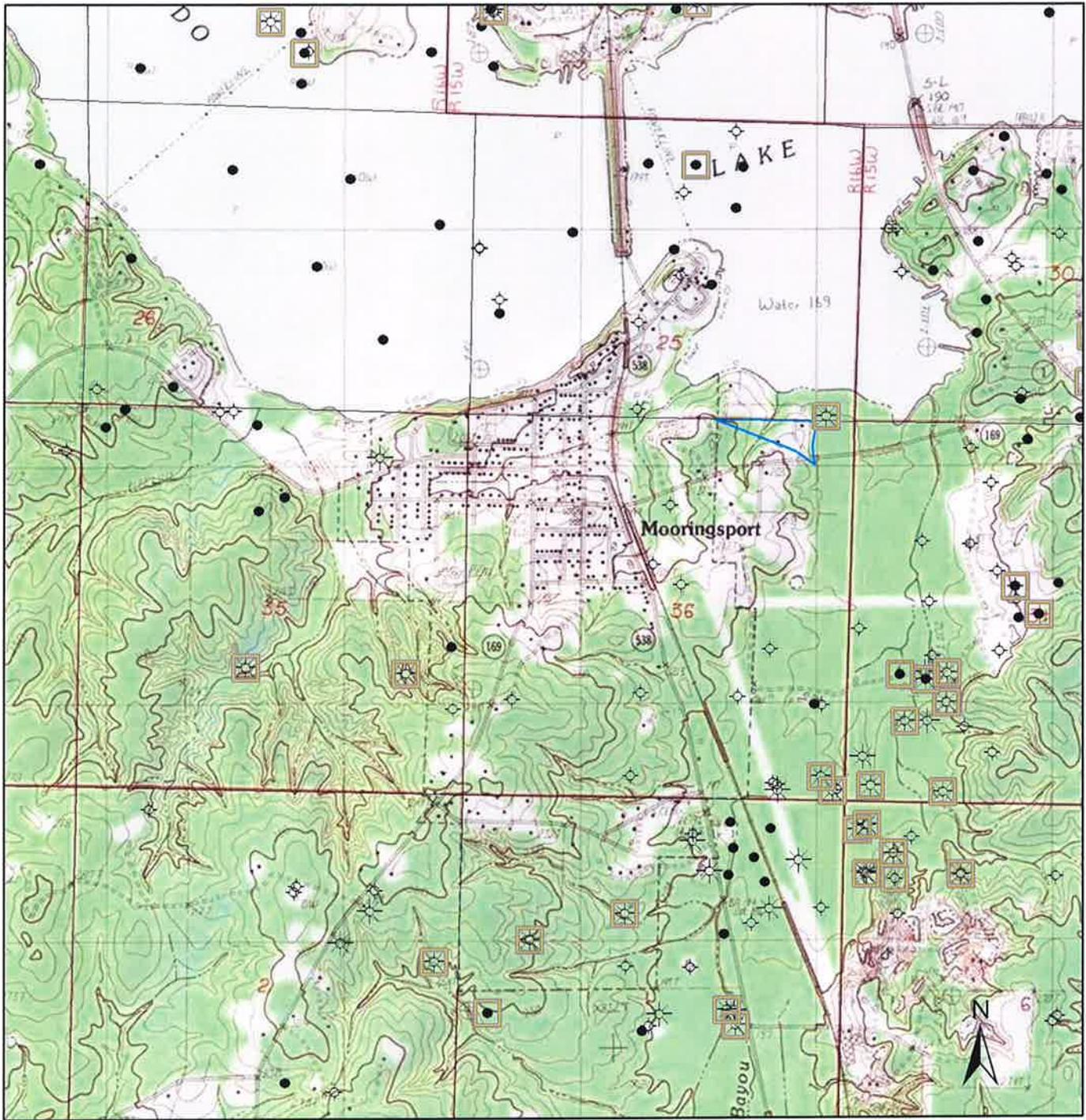


Proposed Lease Area:
 Caddo Parish, Louisiana, Louisiana Meridian
 T. 20N., R. 16W., Sec.32, Lots 1 and 3
 Approximately 91.56 acres.

U.S. Department of the Interior
 Bureau of Land Management
 Eastern States
 Southeastern States Field Office
 Jackson, Mississippi

This map contains portions of the following USGS 1:24,000 Topographic Quadrangles: Potters Point, Moorningsport
 No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

Proposed Federal Oil and Gas Lease
EOI 1715



Proposed Lease Area

Oil and Gas Wells

- ◊ Dry Hole, Temporarily Abandoned
- Oil Well
- ☼ Gas Well
- ⊕ Inj. Srv. CO2. Storage, WDW, Pseudo Orig. Mining Borehole
- ◻ Inactive Wells

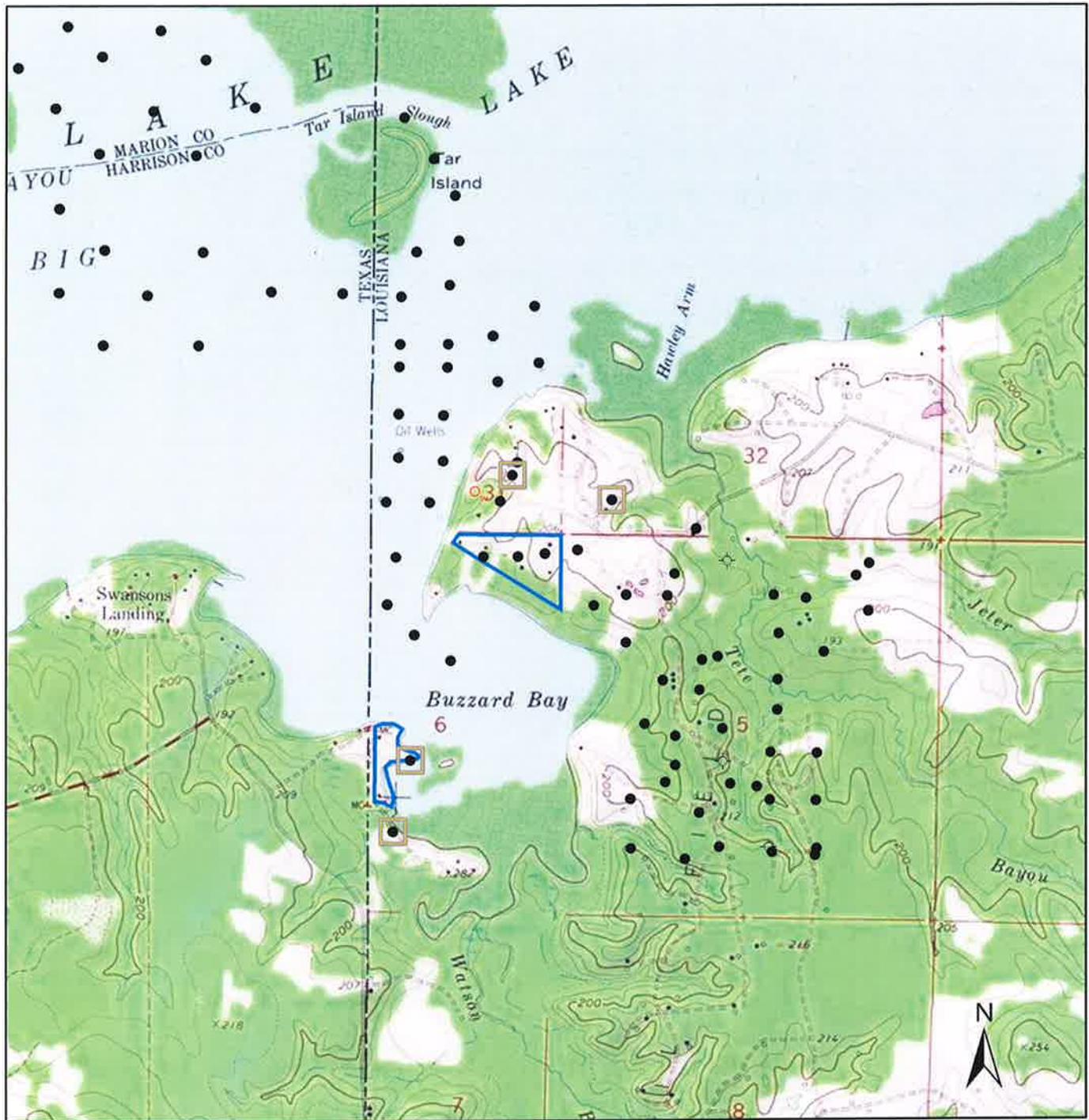


Proposed Lease Area:
Caddo Parish, Louisiana, Louisiana Meridian
T. 20N., R. 16W., Sec. 36 Lots 1
Approximately 9.12 acres.

U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi

This map contains portions of the following USGS 1:24,000 Topographic Quadrangle: Mooringsport
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Proposed Federal Oil and Gas Lease
EOI 1716



Proposed Lease Area

Oil and Gas Wells

- Dry Hole, Temporarily Abandoned
- Oil Well
- Inj. Srv, CO₂, Storage, WDW, Pseudo Orig, Mining Borhole
- Inactive Wells



Proposed Lease Area:
Caddo Parish, Louisiana, Louisiana Meridian
T. 19N., R. 16W., Sec.6, Lots 1 and Fractional
NE Quarter
Approximately 28.08 acres.

U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi

This map contains portions of the following USGS 1:24,000 Topographic Quadrangle: Potters Point

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

APPENDIX B

Proposed Lease Stipulations and Lease Notices

Stipulations

Cultural Resources and Tribal Consultation

Stipulation: This lease may be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E.O. 13007, or other statutes and executive orders. The BLM will not approve any ground disturbing activities that may affect any such properties or resources until it completes its obligations under applicable requirements of the NHPA and other authorities. These obligations may include a requirement that you provide a cultural resources survey conducted by a professional archaeologist approved by the State Historic Preservation Office (SHPO). If currently unknown burial sites are discovered during development activities associated with this lease, these activities must cease immediately, applicable law on unknown burials will be followed and, if necessary, consultation with the appropriate tribe/group of federally recognized Native Americans will take place. The BLM may require modification to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated.

Endangered Species

Stipulation: The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that will contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the Endangered Species Act as amended, 16 U.S.C. ' 1531 et seq., including completion of any required procedure for conference or consultation.

Exception: None

Modification: None

Waiver: None

Sensitive Plant Species

Stipulation (CSU): All suitable special status plant species habitat will be identified during environmental review of any proposed surface use activity. If field examination indicates that habitat of one or more of these species is present, the BLM will require a survey by a qualified botanist for special status plants during periods appropriate to each species. Operations will not be allowed in areas where sensitive plants would be affected.

Objective: To protect threatened, endangered, candidate, proposed, and BLM sensitive plant species.

Exception: An exception may be granted if the operator agrees to implement measures developed in consultation with USFWS and in coordination with State agencies.

Modification: The stipulation may be modified if it is determined that a portion of the lease area does not contain sensitive plant species habitat.

Waiver: The stipulation may be waived if, based on field surveys, it is determined that the lease area does not contain sensitive plant species habitat.

Freshwater Aquatic Habitat

This stipulation applies to EOI #1581, 1711, 1714, 1715, and 1716.

Stipulation (NSO): No surface occupancy or disturbance, including discharges, are permitted within 250 feet of a river, stream, wetland spring, headwater, wet meadow, wet pine savanna, pond, tributary, lake, coastal slough, sand bar, vernal pools, calcareous seepage marsh, or small, marshy calcareous stream. If the slope exceeds 10 percent, the buffer may be extended to 600 feet to provide adequate protection for aquatic habitats and associated species.

Objective: To protect the water quality of watersheds and natural stream substrate and morphology and to avoid potential impacts to aquatic species and their habitat.

Exception: An exception may be granted if the operator agrees to 1) span creeks, rivers, wetlands, and floodplains by attaching pipelines to bridges; 2) directionally drill wells and pipelines from upland sites under creeks, rivers, other waters, and wetlands or 3) implement other measures developed in consultation with USFWS and in coordination with State agencies.

Modification: The buffer may be reduced if the adjacent waterway has been surveyed for 100 yards upstream and 300 yards downstream of the site, and the results document the lack of suitable/occupied/critical habitat for listed species which may be affected by the project, as determined by the BLM and USFWS.

Waiver: None

Bald Eagle

This stipulation applies to EOI #1711.

Stipulation (NSO): No surface occupancy or disturbance will be permitted within a 660-foot buffer zone (1,500-foot buffer zone in LA) around active or inactive bald eagle nests and communal roost sites.

Objective: To avoid impact to nesting eagles, including impact to courtship and nesting behavior, egg laying and incubation, and feeding and fledging activity.

Exception: An exception may be granted if the operator agrees to implement measures developed in consultation with USFWS and appropriate State agencies.

Modification: This stipulation may be modified to remain consistent with Federal or State guidelines or

if a portion of the stipulated area is no longer within the 660-foot buffer zone (1,500-foot buffer zone in LA).

Waiver: This stipulation may be waived if no suitable nest sites are within 660 feet (1,500 feet in LA) of any portion of the leased tract or if documented evidence can be provided that an inactive nest within 660 feet (1,500 feet in LA) has not been used for at least 5 years.

Bald Eagle

This stipulation applies to EOI #1711.

Stipulation (CSU): BLM-permitted projects will not remove trees suitable for nesting within a 0.5-mile buffer zone around active or inactive bald eagle nests and communal roost sites.

Objective: To protect foraging habitat, promote nest fidelity, and maintain habitat integrity around bald eagle nests and communal roosting sites.

Exception: An exception may be granted if the operator agrees to implement measures developed in consultation with USFWS and in coordination with State agencies.

Modification: This stipulation may be modified to remain consistent with Federal and State guidelines or if a portion of the stipulated area is no longer within the 0.5-mile buffer zone.

Waiver: This stipulation may be waived if no nest or communal roosting site can be identified within 0.5 miles of the leased tract or if the applicant can document that no sites have been used by bald eagles for 5 consecutive years.

Interior Least Tern

This stipulation applies to EOIs #1714, 1715, and 1716:

Stipulation: Seasonal Limitation: No surface disturbance within a 650foot buffer (LA) and 1,000foot buffer (AR and KY) from sandbars on the Mississippi, Ohio, Arkansas, and Red Rivers. during interior least tern nesting season (May 15-August 31).

Objective: To protect interior least tern nesting and feeding habitat.

Exception: An exception may be granted if the operator agrees to implement measures developed in consultation with the USFWS and in coordination with State agencies.

Modification: Temporary surface use may be permitted if USFWS concurs that the action would not adversely affect least tern or suitable habitat.

Waiver: This stipulation may be waived if suitable interior least tern habitat does not occur within 650 feet (LA) or 1,000 feet (AR and KY) of the leased tract.

Lease Notices/Best Management Practices

Disposal of Produced Water

Objective: To protect aquatic habitats for and to avoid potential impacts to special status fish, mussels, turtles, snails, plants, and migratory birds.

The preferred method for disposal of produced water will be through reinjection to a permeable formation with total dissolved solids (TDS) content higher than 10,000 milligrams per liter (mg/L) where the aquifer is not hydrologically connected to caves, wetlands, or surface water. In Alabama, the injection of produced water is regulated by the Alabama State Oil and Gas Board. In Mississippi, the injection of produced water is regulated by the Mississippi Department of Environmental Quality (MDEQ) and the Mississippi Oil and Gas Board.

If reinjection is not practicable, closed-containment treatment systems should be used to contain and treat produced water for those contaminants and sediments exceeding State standards or EPA criteria. Salt content of any surface ponds for produced water, pigging pits, or other fluids must be less than 7,500 microsiemens per centimeter ($\mu\text{S}/\text{cm}$). If surface pond salt content is greater than 7,500 $\mu\text{S}/\text{cm}$, if other bird toxicity is present, or if the surface exhibits sheen, then the ponds must be netted or covered with floating balls, or other methods must be used to exclude migratory birds.

Produced waters may be released into an impounded reservoir if there is documentation that the discharge site and affected waters do not support special status species, are not designated critical habitat, and State and Federal water quality standards/criteria are met.

Produced waters may be released into a stream/river if the discharge site and affected waters have been recently surveyed and lack special status species, or if the applicant conducts approved surveys documenting the absence of special status species, State and Federal water quality standards/criteria are met, and a National Pollution Discharge Elimination System (NPDES) permit is obtained. The applicant should be aware that some species can be surveyed only during certain times of the year.

Produced waters may be released into a stream/river if the applicant can document that the produced waters would not adversely affect special status species. Water quality tests would be conducted on stream segment(s) or other locations proposed as discharge points, volumes to be released, and any settling ponds or other treatments proposed to improve wastewater quality. The water quality test data, any monitoring proposed, and other available information about general coalbed methane effluent characteristics (from published or unpublished literature) shall be reviewed by USFWS. Information about timing of the releases in relation to low water and other planned BMPs would also be required. Testing would include analysis of the discharge site and affected waters for chemical oxygen demand (COD), conductivity, total suspended solids (TSS), As, Hg, Se, and polycyclic aromatic hydrocarbons (PAH). Dissolved oxygen and ammonia standards/criteria must be met in bottom waters if they support listed benthic or epibenthic species. If a special status species has been documented to be more sensitive than State/Federal standards/criteria, site-specific standards for that species may be imposed. Calculations would be

based on State standards (or Federal CCC criteria for protection of freshwater aquatic life when the State has not determined a standard for these parameters).

Migratory Birds and Federally Listed Wildlife

Objective: To protect perch and roosting sites and terrestrial habitats for and to avoid potential impacts to migratory birds and federally listed wildlife.

Any reserve pit that is not closed within 10 days after a well is completed and that contains water must be netted or covered with floating balls, or another method must be used to exclude migratory birds.

All powerlines must be built to protect raptors and other migratory birds, including bald eagles, from accidental electrocution, using methods detailed by the Avian Power Line Interaction Committee (APLIC 2006)

Perching and Nesting Birds and Bats

Objective: To prevent birds and bats from entering or nesting in or on open vent stack equipment.

Open vent stack equipment, such as heater-treaters, separators, and dehydrator units, will be designed and constructed to prevent birds and bats from entering or nesting in or on such units and, to the extent practical, to discourage birds from perching on the stacks. Installing cone-shaped mesh covers on all open vents is one suggested method. Flat mesh covers are not expected to discourage perching and will not be acceptable.

Invasive and Non-Native Species

Objective: To discourage the spread of invasive, non-native plants.

Use of native or non-invasive plants in seeding mixtures will be encouraged to stabilize disturbed areas and during restoration activities. Construction sites will be surveyed for invasive species prior to ground disturbance. If invasive species are found, the proper control measures will be used to either eradicate the species from the area or minimize its spread to other areas. If cogongrass is found on site, equipment will be washed before exiting the site to prevent the spread of this highly invasive species to other locations. Post-construction monitoring for cogongrass and other invasive plant species should be conducted to ensure early detection control. In the case of split-estate lands, final seed mixtures will be formulated in consultation with the private landowner.

Pesticide Application

Objective: To protect the water quality of watersheds and natural stream substrate and morphology supporting special status species and their host species.

Any ground application of herbicides or other pesticides, sterilants, or adjuvants within 150 feet of listed species or habitat will require site-specific control measures developed in coordination or formal consultation with USFWS. No aerial application of herbicides or pesticides will be permitted.

APPENDIX C

Correspondence



United States Department of the Interior



Bureau of Land Management

Southeastern States Field Office
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206
<http://www.es.blm.gov>

IN REPLY REFER TO:

8100 (020) JMS Rapides Parishes, LA EOI 1581

Sept. 25, 2012

Ms. Pam Breaux
State Historic Preservation Officer
Louisiana Office of Cultural Development
P.O. Box 44247
Baton Rouge, LA 70804-44247

Dear Ms. Breaux:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 1581) to lease federal minerals under privately owned surface, i.e. split-estate minerals. The Bureau's reasonably foreseeable development scenario (RFD) for this proposed lease is 1 well from 1 pad to be constructed on private surface with no more than 6.97 acres total, this includes access road, pipelines and pad, to be disturbed accessing federal minerals. The legal locations of the approximately 38.02 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian

Rapides Parish (Lena Quadrangle)

T. 5 N., R. 4 W., Sec. 4, SWNW (Approx. 38.02 ac.)

Development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners. The BLM's surface responsibilities rest only within the boundaries of any proposed development.

A review of the Louisiana Division of Archaeology online site files shows no sites within the lease sale area or within one mile of area. An archaeological survey will be required before any development and or ground disturbing activities begin. Also the report must be approved by both



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the Louisiana Division of Archaeology and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.

Your concurrence of these procedures for Section 106 compliance is requested in 30 days. If you have any questions or concerns, please contact John M. Sullivan, Archeologist, at (601) 977-5439 or email at John_M_Sullivan@BLM.Gov.

Sincerely,



Gary Taylor
Acting for Duane Winters,
Assistant Field Manager
Division of Lands and Renewable Resources

Enclosure
1 Map

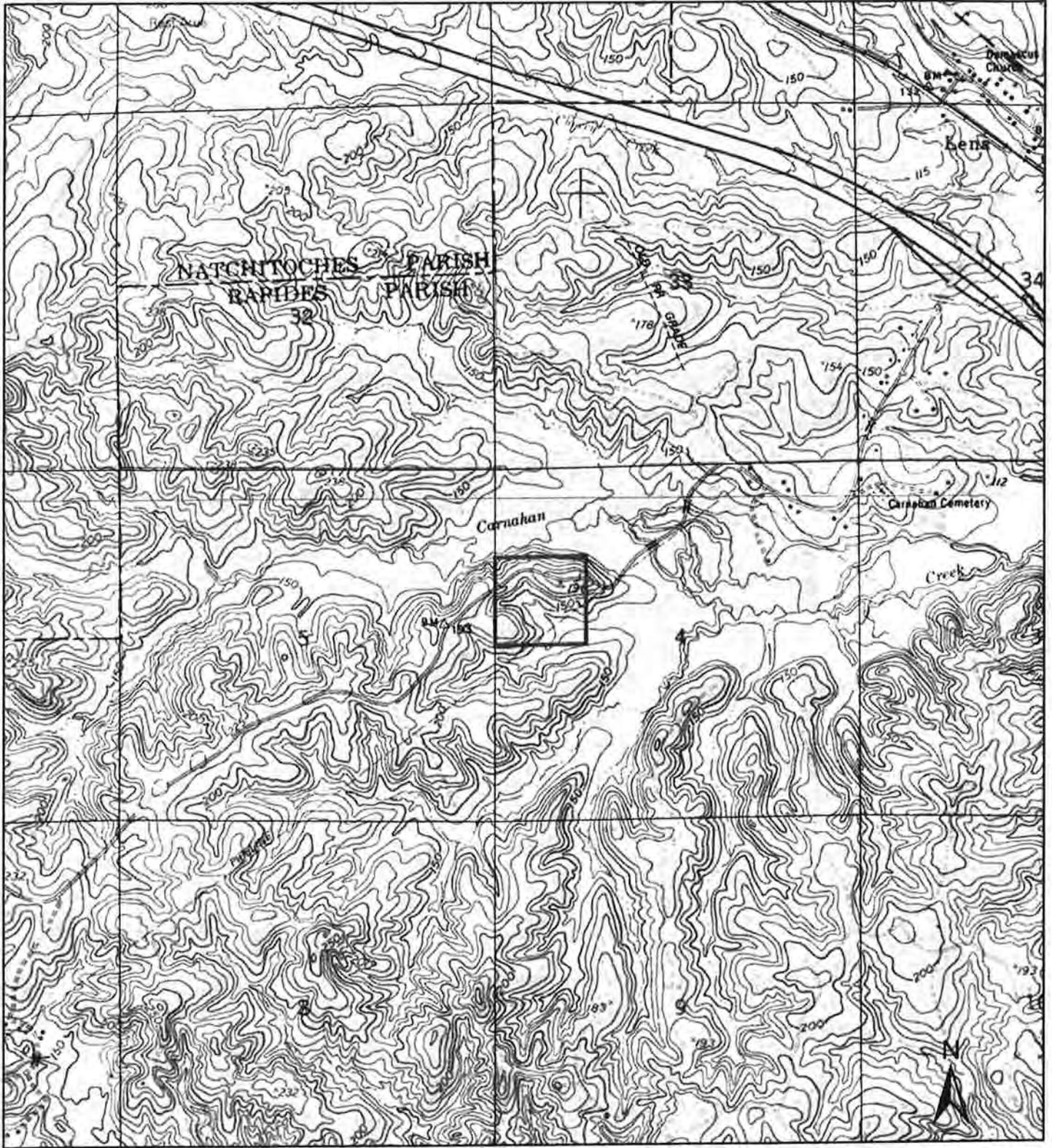
bc:
JFO CF & RF
ES RF
DWinters
AMcCartney
ES020-JMSullivan:09/25/12:601-977-5400:Rapides.T.5N.R.4W.Sec.4.EOI 1581.SHPO.Ltr



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**Proposed Federal Oil and Gas Lease
EOI 1581**



 Proposed Lease Area

Proposed Lease Area:
Rapides Parish, Louisiana Meridian
T. 5N., R. 4W., Sec. 4, SWNW
Approximately 38.02 acres.

**U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi**

This map contains portions of the following USGS 1:24,000 Topographic Quadrangle: Lena

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United States Department of the Interior



Bureau of Land Management

Southeastern States Field Office

411 Briarwood Drive, Suite 404

Jackson, Mississippi 39206

<http://www.es.blm.gov>

IN REPLY REFER TO:

8100 (020) JMS Rapides Parishes, LA EOI 1581

Sept. 25, 2012

Gregory Pyle, Chief
Choctaw Nation of Oklahoma
Drawer 1210
Durant, Oklahoma 74702-1210

Dear Chief Pyle:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 1581) to lease federal minerals under privately owned surface, i.e. split-estate minerals. The Bureau's reasonably foreseeable development scenario (RFD) for this proposed lease is 1 well from 1 pad to be constructed on private surface with no more than 6.97 acres total, this includes access road, pipelines and pad, to be disturbed accessing federal minerals. The legal locations of the approximately 38.02 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian

Rapides Parish (Lena Quadrangle)

T. 5 N., R. 4 W., Sec. 4, SWNW (Approx. 38.02 ac.)

Development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners. The BLM's surface responsibilities rest only within the boundaries of any proposed development.

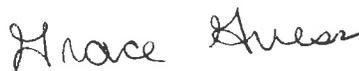
A review of the Louisiana Division of Archaeology online site files shows no sites within the lease sale area or within one mile of area. An archaeological survey will be required before any development and or ground disturbing activities begin. Also the report must be approved by both the Louisiana Division of Archaeology and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.



If you are aware of any sites or areas which are currently used for religious purposes or are recognized as sacred sites on these privately owned lands, please let us know the locations so that impacts will not occur. As provided by law, these locations will be held in confidence.

Your information is requested within 30 days. If you have any questions, comments, or concerns about the BLM's processes or procedures concerning its consideration of cultural resources for this undertaking, please contact John M. Sullivan, Archaeologist, at (601) 977-5400 or email at John_M_Sullivan@BLM.Gov.

Sincerely,



Grace Guess,
Associate Field Manager

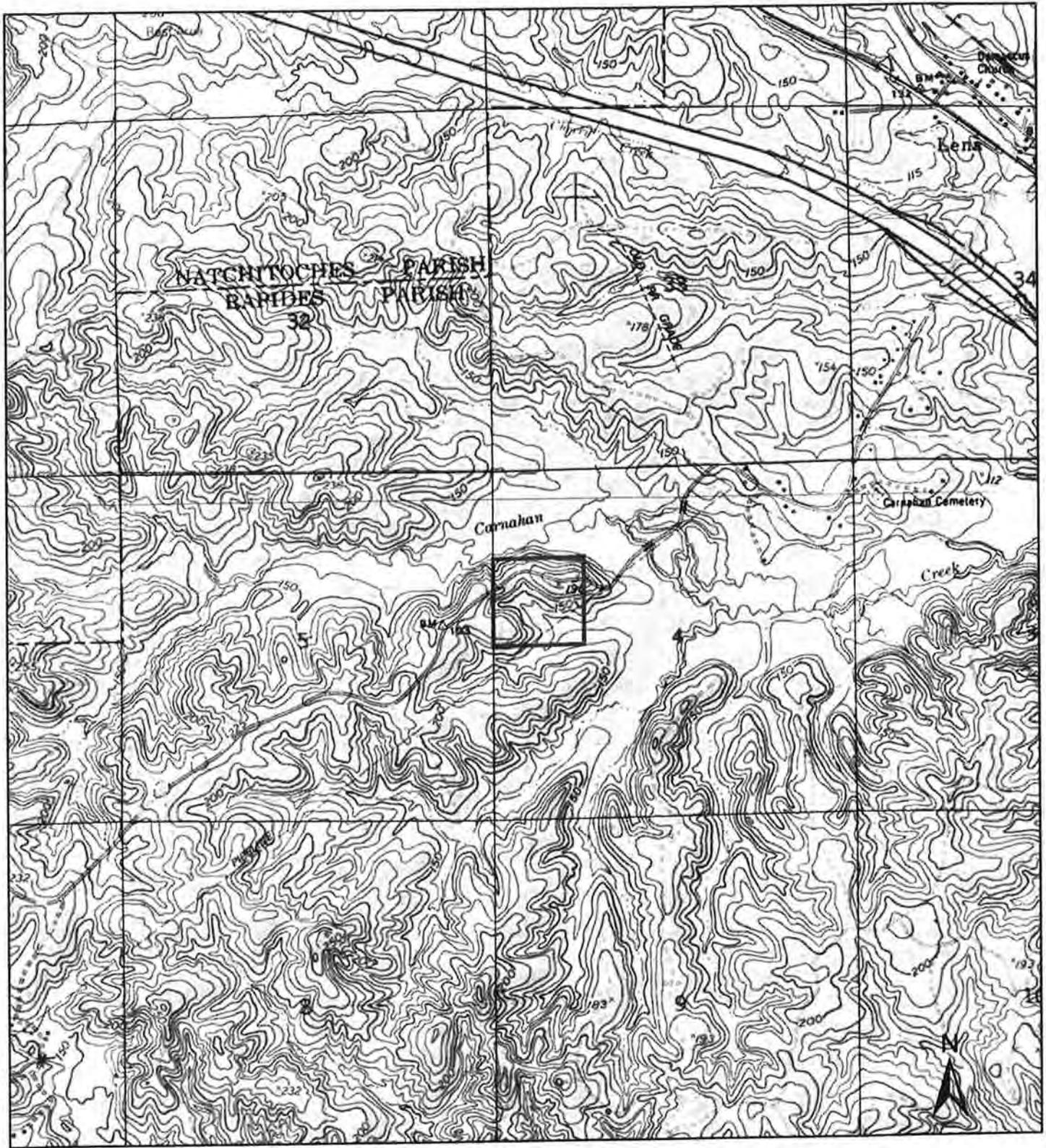
Acting for Bruce Dawson,
Field Manager

Enclosure
1 Map

cc via email: Ian Thompson PhD, RPA, THPO, Tribal Archaeologist
Johnnie L. Jacobs, Section 106 Coordinator



**Proposed Federal Oil and Gas Lease
EOI 1581**



2,000 1,000 0 2,000 4,000 6,000 Feet

 Proposed Lease Area

Proposed Lease Area:
Rapides Parish, Louisiana Meridian
T. 5N., R. 4W., Sec. 4, SWNW
Approximately 38.02 acres.

**U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi**

This map contains portions of the following USGS 1:24,000 Topographic Quadrangle: Lena

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United States Department of the Interior



Bureau of Land Management

Southeastern States Field Office

411 Briarwood Drive, Suite 404

Jackson, Mississippi 39206

<http://www.es.blm.gov>

IN REPLY REFER TO: 8100 (020) JMS Caddo Parish EOI 1672

Dec. 10, 2012

Chairman Earl Barbry, Sr.
Tunica-Biloxi Tribe of Louisiana
P.O. Box 332
Marksville, Louisiana 70523

Dear Chairman Barbry:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 1672) to lease federal minerals under privately owned surface, i.e. split-estate minerals. The Bureau's Reasonably Foreseeable Development Scenario for this proposed lease is multiple horizontal wells from one pad to be constructed on private surface with no more than 6.29 acres total, access road and pads, to be disturbed accessing federal minerals. The legal locations of the approximately 39.88 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian

Caddo Parish (Gilliam and Dixie Quadrangles)

T. 20 N., R. 14 W., Sec. 8, SESW (Approx. 39.88 ac.)

However, proposed development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners. The BLM's surface responsibilities rest only within the boundaries of any proposed development. A review of the Louisiana Division of Archaeology online site files shows sites within one mile of the proposed lease sale.

A section of the lease document will state that before the BLM approves any development proposal, a survey that meets current professional standards and a report that meets Louisiana Division of Archaeology requirements. The report must be approved by both the Louisiana



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Division of Archaeology and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.

In addition, a stipulation will be included in the lease document which covers accidental discovery and requires additional consultation with you and the Louisiana Division of Archaeology. This stipulation will also be included in the permitting documents when, or if, a development proposal is submitted.

If you are aware of any sites within the proposed lease area which are currently being used for religious purposes or are recognized as sacred sites on these privately owned lands, please let us know so that additional consultation can be conducted and so that impacts will not occur. As provided by law, any specific location information will be held in confidence. Your information is requested within 30 days.

If you have any questions or comments, please contact John M. Sullivan, Archeologist, at (601) 977-5439 or John_M_Sullivan@BLM.Gov.

Sincerely,

Original Signed
Duane Winters

Duane Winters
Assistant Field Manager, Division of Lands and
Renewable Resources

Acting for Bruce Dawson,
Field Manager

Enclosures

1 - Map

cc via email: Mr. Earl Barbry, Jr., Tribal Historic Preservation Officer

bc:

SSFO CF & RF

ES RF

DWinters

~~AMcCartney~~

ES020: JMSullivan:12/10/12:601-977-5400:Caddo.T.20N.R.14W.Sec.8.EOI 1672.NA.Ltr



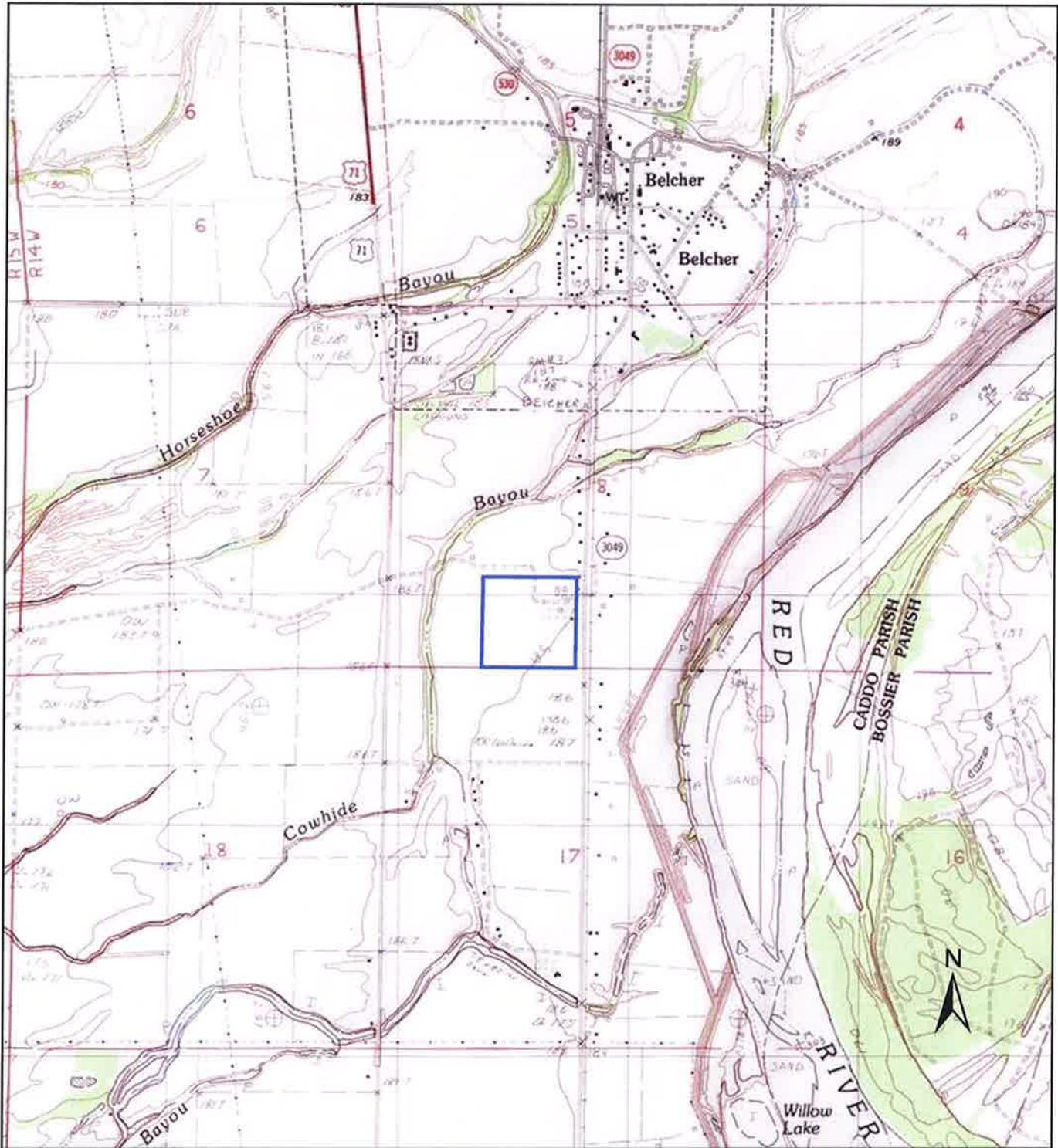
| Original to: | cc: to these: |
|--|---|
| Mr. Earl Barbry, Sr., Chairman Tunica-Biloxi Tribe of Louisiana P.O. Box 331 Marksville, Louisiana 70523 | Mr. Earl Barbry, Jr., Tribal Historic Preservation Officer Tunica - Biloxi Tribe 151 Melacon Dr. Marksville, LA 71351 earlii@tunica.org |
| Oscola Clayton Sylestine, Chairman Alabama-Coushatta Tribe of Texas 571 State Park Road 56 Livingston, TX 77351 | Bryant J. Celestine, Historical Preservation Alabama-Coushatta Tribe of Texas 571 State Park Road 56 Livingston, TX 77351 celestine.bryant@actribe.org |
| Kevin Sickey, Chairman Coushatta Indian Tribe P.O. Box 818 Elton, LA 70532 | Send Hard Copy Linda Langley, Tribal Historic Preservation Officer Mike Tarpley, Deputy THPO P.O. Box 818 Elton, LA 70532 llangley@mcneese.edu ; kokua.aina57@gmail.com |
| John Paul Darden, Chairman Chitimacha Tribe of Louisiana P.O. Box 661 Charenton, LA 70523 | Kimberly S. Walden, Tribal Historic Preservation Officer Chitimacha Tribe of Louisiana P.O. Box 661 Charenton, LA 70523 kim@chitimacha.gov |
| John Berrey, Chairman Quapaw Tribe of Oklahoma P.O. Box 765 Quapaw, Oklahoma 74345 | Jean Ann Lambert, Cultural/Historic Preservation Office P.O. Box 1556 Miami, OK 74355 jlambert@quapawtribe.com |
| Brenda Shemayne Edwards, Chairwoman Caddo Nation of Oklahoma P.O. Box 487 Binger, Oklahoma 73009 | Mr. Robert Cast, Tribal Historic Preservation Officer Caddo Nation of Oklahoma P.O. Box 487 Binger, OK 73009 rcast@caddonation.org ; mboatone@caddonation.org |
| A.D. Ellis, Principal Chief Muscogee (Creek) Nation of Oklahoma P.O. Box 580 Okmulgee, Oklahoma 74447 | Emman Spain, Cultural/Historic Preservation Office Muscogee (Creek) Nation of Oklahoma P.O. Box 580 Okmulgee, OK 74447 espain@muscogeenation-nsn.gov |
| Leonard Hatjo, Principal Chief Seminole Nation of Oklahoma P.O. Box 1498 Wewoka, Oklahoma 74884 | Natalie Deer, Cultural Preservation Office P.O. Box 1768 Seminole, OK 74868-1768 ndeere@seminolenation.com |



| Original to: | cc: to these: |
|--|---|
| <p>Only send email to Preservation Officer Tarpie Yargee, Chief Alabama-Quassarte Tribal Town P.O. Box 187 Wetumka, OK 74883</p> | <p>Augustine Asbury, 2nd Chief/ Cultural Preservation Officer P.O. Box 187 Wetumka, OK 74883 aqttcultural@yahoo.com</p> |
| <p>Only send email to Preservation Officer Gregory Pyle, Chief Choctaw Nation of Oklahoma Drawer 1210 Durant, Oklahoma 74702-1210</p> | <p>Ian Thompson PhD, RPA, THPO, Tribal Archaeologist, Director Historic Preservation Dept. Johnnie L. Jacobs, Section 106 Coordinator 580-775-0914, 580-920-3181 (Fax) 1-800-522-6170 ext. 2216 P.O. Drawer 1210 Durant, OK 74702 ithompson@choctawnation.com; jjacobs@choctawnation.com</p> |
| <p>B. Cheryl Smith, Chief Jena Band of Choctaw P.O. Box 2717 Jena LA 71342</p> | <p>Dana Masters, Tribal Council and Cultural Preservation Officer Jena Band of Choctaw P.O. Box 2717 Jena LA 71342 danammasters@aol.com</p> |
| <p>Phyliss J. Anderson, Chief Mississippi Band of Choctaw Indians P.O. Box 6010 Philadelphia, MS 39350</p> | <p>Mr. Ken Carleton, Tribal Historic Preservation Officer Mississippi Band of Choctaw Indians P.O. Box 6257 Philadelphia, MS 39350 kcarleton@choctaw.org</p> |
| <p>George Scott, Mekko Thlopthlocco Tribal Town P.O. Box 188 Okemah, Oklahoma 74859</p> | <p>Charles Coleman, Cultural/Historic Preservation Office P.O. Box 188 Okemah, Oklahoma 74859 chascolem@prodgy.net</p> |



**Proposed Federal Oil and Gas Lease
EOI 1672**



 Proposed Lease Area

Proposed Lease Area:
Caddo Parish, Louisiana, Louisiana Meridian
T. 20N., R. 14W., Sec.8, SESW
Approximately 39.88 acres.

**U.S. Department of the Interior
Bureau of Land Management
Eastern States, Jackson Field Office
Jackson, Mississippi**

This map contains portions of the following USGS 1:24,000 Topographic Quadrangles: Gilliam, Dixie

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United States Department of the Interior



Bureau of Land Management

Southeastern States Field Office
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206
<http://www.es.blm.gov>

IN REPLY REFER TO:

8100 (020) JMS Rapides Parishes, LA EOI 1711

Dec. 10, 2012

Chairman Earl Barbry, Sr.
Tunica-Biloxi Tribe of Louisiana
P.O. Box 332
Marksville, Louisiana 70523

Dear Chairman Barbry:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 1711) to lease federal minerals under privately owned surface, i.e. split-estate minerals. The Bureau's reasonably foreseeable development scenario (RFD) for this proposed lease is 4 wells from 1 pad to be constructed on private surface with no more than 6.42 acres total, this includes access road, pipelines and pad, to be disturbed accessing federal minerals. The legal locations of the approximately 22.16 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian

Rapides Parish (Latanier, Woodworth East, Alexandria and Libuse Quadrangles)
T. 3 N., R. 1 E., Sec. 9, Entire Section (Approx. 22.16 ac.)

Development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners. The BLM's surface responsibilities rest only within the boundaries of any proposed development.

A review of the Louisiana Division of Archaeology online site files shows no sites within the lease sale area although there are some sites within one mile of the proposed lease area. An archaeological survey will be required before any development and or ground disturbing activities begin. Also the report must be approved by both the Louisiana Division of Archaeology and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.



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If you are aware of any sites or areas which are currently used for religious purposes or are recognized as sacred sites on these privately owned lands, please let us know the locations so that impacts will not occur. As provided by law, these locations will be held in confidence.

Your information is requested within 30 days. If you have any questions, comments, or concerns about the BLM's processes or procedures concerning its consideration of cultural resources for this undertaking, please contact John M. Sullivan, Archaeologist, at (601) 977-5400 or email at John_M_Sullivan@BLM.Gov.

Sincerely,

**Original Signed
Bruce Dawson**

Bruce Dawson,
Field Manager

Enclosure
1 Map

cc via email: Mr. Earl Barbry, Jr., Tribal Historic Preservation Officer

Same letter sent as an original w/ a cc via email: to the attached list.

bc:

JFO CF & RF

ES RF

DWinters

AMcCartney

ES020: JMSullivan:12/10/12:601-977-5400:Rapides.T.3N.R.1E.Sec.9.EOI 1711.NA.Ltr



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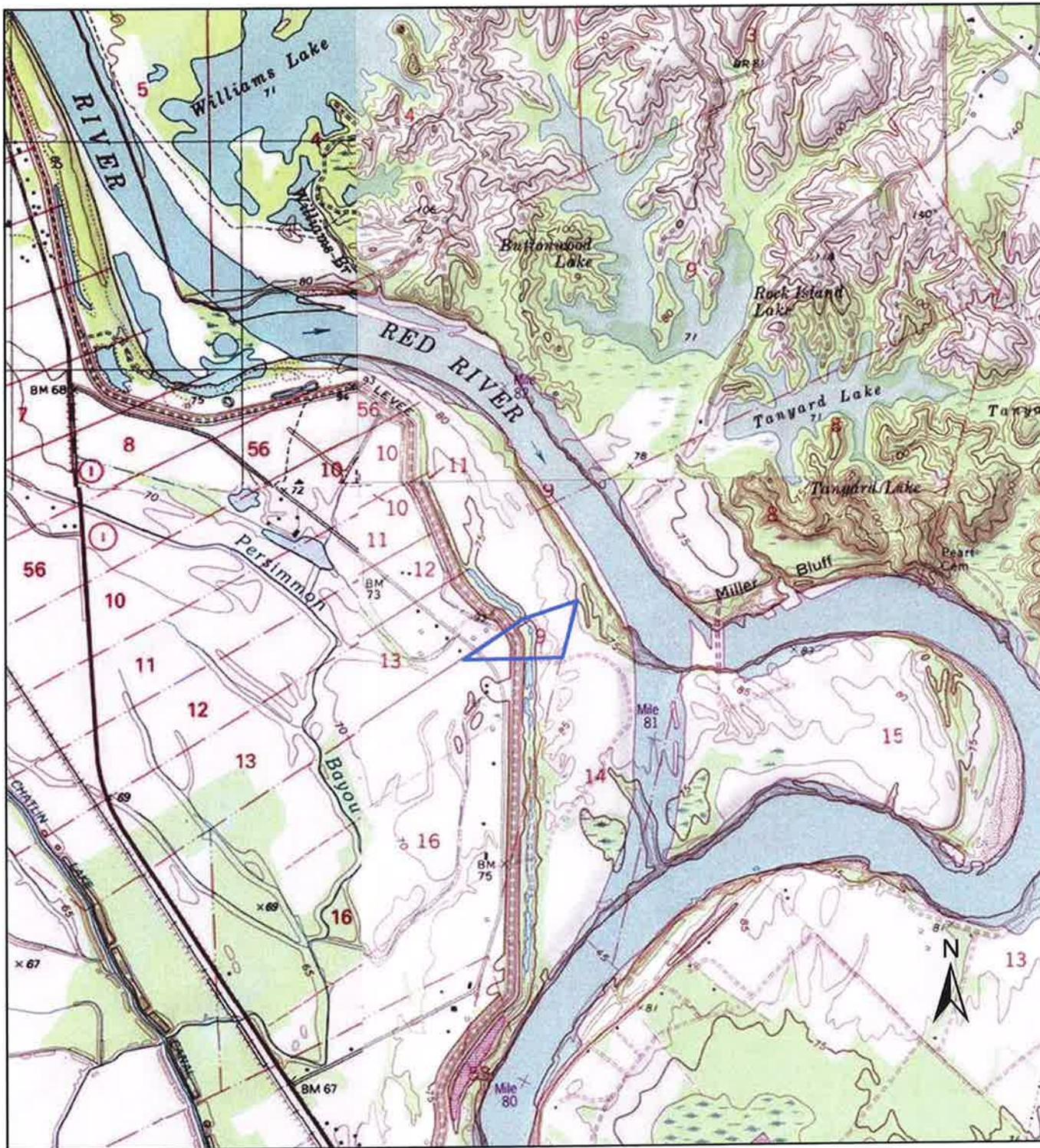
| Original to: | cc: to these: |
|--|--|
| Mr. Earl Barbry, Sr., Chairman Tunica-Biloxi Tribe of Louisiana P.O. Box 331 Marksville, Louisiana 70523 | Mr. Earl Barbry, Jr., Tribal Historic Preservation Officer Tunica - Biloxi Tribe 151 Melacon Dr. Marksville, LA 71351 earlii@tunica.org |
| Brenda Shemayne Edwards, Chairwoman Caddo Nation of Oklahoma P.O. Box 487 Binger, Oklahoma 73009 | Mr. Robert Cast, Tribal Historic Preservation Officer Caddo Nation of Oklahoma P.O. Box 487 Binger, OK 73009 rcast@caddonation.org ; mboatone@caddonation.org |
| Oscola Clayton Sylestine, Chairman Alabama-Coushatta Tribe of Texas 571 State Park Road 56 Livingston, TX 77351 | Bryant J. Celestine, Historical Preservation Alabama-Coushatta Tribe of Texas 571 State Park Road 56 Livingston, TX 77351 celestine.bryant@actribe.org |
| Kevin Sickey, Chairman Coushatta Indian Tribe P.O. Box 818 Elton, LA 70532 Mail both sides in email | Linda Langley, Tribal Historic Preservation Officer Mike Tarpley, Deputy THPO P.O. Box 818 Elton, LA 70532 llangley@mcneese.edu ; kokua.aina57@gmail.com |
| John Paul Darden, Chairman Chitimacha Tribe of Louisiana P.O. Box 661 Charenton, LA 70523 | Kimberly S. Walden, Tribal Historic Preservation Officer Chitimacha Tribe of Louisiana P.O. Box 661 Charenton, LA 70523 kim@chitimacha.gov |
| Only send email to Preservation Officer Tarpie Yargee, Chief Alabama-Quassarte Tribal Town P.O. Box 187 Wetumka, OK 74883 | Augustine Asbury, 2nd Chief/ Cultural Preservation Officer P.O. Box 187 Wetumka, OK 74883 aqttcultural@yahoo.com |
| George Scott, Mekko Thlopthlocco Tribal Town P.O. Box 188 Okemah, Oklahoma 74859 | Charles Coleman, Cultural/Historic Preservation Office P.O. Box 188 Okemah, Oklahoma 74859 chascoleman@prodgy.net |



| Original to: | cc: to these: |
|--|--|
| <p>Only send email to Preservation Officer Gregory Pyle, Chief Choctaw Nation of Oklahoma Drawer 1210 Durant, Oklahoma 74702-1210</p> | <p>Ian Thompson PhD, RPA, THPO, Tribal Archaeologist, Director Historic Preservation Dept. Ms. Johnnie Jacobs, Section 106 Coordinator 580-775-0914, 580-920-3181 (Fax) 1-800-522-6170 ext. 2216 P.O. Drawer 1210 Durant, OK 74702 ithompson@choctawnation.com; jjacobs@choctawnation.com</p> |
| <p>Phyliss J. Anderson, Chief Mississippi Band of Choctaw Indians P.O. Box 6010 Philadelphia, MS 39350</p> | <p>Mr. Ken Carleton, Tribal Historic Preservation Officer Mississippi Band of Choctaw Indians P.O. Box 6257 Philadelphia, MS 39350 kcarleton@choctaw.org</p> |
| <p>James E. Billie, Chairman 6300 Stirling Road Hollywood, Florida 33024</p> | <p>Dr. Paul N. Backhouse, Tribal Historic Preservation Officer Bradley M. Mueller, M.A., Compliance Review Supervisor 30290 Josie Billie Hwy, PMB 1004 Clewiston, FL 33440 (863) 983-6549 (863) 983-6549 ext. 12262 paulbackhouse@semtribe.com; bradleymueller@semtribe.com ElliottYork@semtribe.com; AlisonSwing@semtribe.com</p> |
| <p>Leonard Harjo, Principal Chief Seminole Nation of Oklahoma P.O. Box 1498 Wewoka, Oklahoma 74884</p> | <p>Natalie Deer, Cultural Preservation Office P.O. Box 1768 Seminole, OK 74868-1768 ndeere@seminolenation.com</p> |
| <p>B. Cheryl Smith, Chief Jena Band of Choctaw P.O. Box 2717 Jena LA 71342</p> | <p>Dana Masters, Tribal Council and Tribal Historic Preservation Officer Jena Band of Choctaw P.O. Box 2717 Jena LA 71342 danammasters@aol.com</p> |



Proposed Federal Oil and Gas Lease
EOI 1711



 Proposed Lease Area

Proposed Lease Area:
Rapides Parish, Louisiana, Louisiana Meridian
T. 3N., R. 1E., Sec. 9, Entire section
Approximately 22.16 acres.

U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi

This map contains portions of the following USGS 1:24,000 Topographic Quadrangles: Latanier, Woodworth East, Alexandria, Libuse

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.



United States Department of the Interior



Bureau of Land Management

Southeastern States Field Office

411 Briarwood Drive, Suite 404

Jackson, Mississippi 39206

<http://www.es.blm.gov>

IN REPLY REFER TO: 8100 (020) JMS Caddo Parish EOI 1672

Dec. 10, 2012

Ms. Pam Breaux
State Historic Preservation Officer
Louisiana Office of Cultural Development
P.O. Box 44247
Baton Rouge, LA 70804-44247

Dear Ms. Breaux:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 1672) to lease federal minerals under privately owned surface, i.e. split-estate minerals. The Bureau's Reasonably Foreseeable Development Scenario for this proposed lease is multiple horizontal wells from one pad to be constructed on private surface with no more than 6.29 acres total, access road and pads, to be disturbed accessing federal minerals. The legal locations of the approximately 39.88 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian
Caddo Parish (Gilliam and Dixie Quadrangles)
T. 20 N., R. 14 W., Sec. 8, SESW (Approx. 39.88 ac.)

However, proposed development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners. The BLM's surface responsibilities rest only within the boundaries of any proposed development. A review of the Louisiana Division of Archaeology online site files shows sites within one mile of the proposed lease sale.

A section of the lease document will state that before the BLM approves any development proposal, a survey that meets current professional standards and a report that meets Louisiana Division of Archaeology requirements. The report must be approved by both the Louisiana



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Division of Archaeology and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.

Your concurrence of these procedures for Section 106 compliance is requested in 30 days. If you have any questions or concerns, please contact John M. Sullivan, Archeologist, at (601) 977-5439 or email at John_M_Sullivan@BLM.Gov.

Sincerely,

**Original Signed
Duane Winters**

Duane Winters
Assistant Field Manager
Division of Lands and Renewable Resources

Enclosures
1- Map

bc:

SSFO CF & RF

ES RF

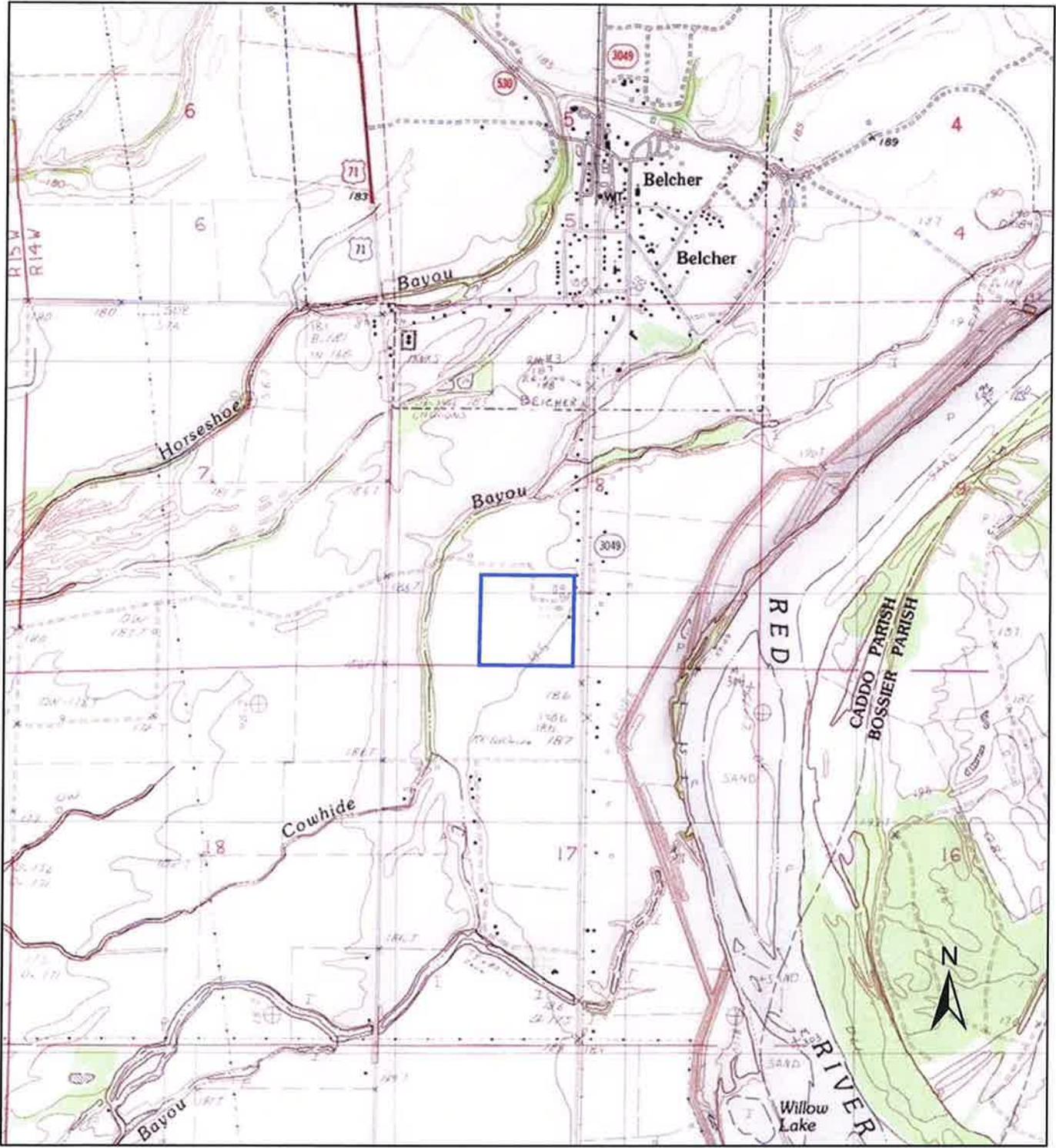
DWinters

AMcCartney

ES020: JMSullivan:12/10/12:601-977-5400:Caddo.T.20N.R.14W.Sec.8.EOI 1672.SHPO.Ltr



**Proposed Federal Oil and Gas Lease
EOI 1672**



 Proposed Lease Area

Proposed Lease Area:
Caddo Parish, Louisiana, Louisiana Meridian
T. 20N., R. 14W., Sec.8, SESW
Approximately 39.88 acres.

U.S. Department of the Interior
Bureau of Land Management
Eastern States, Jackson Field Office
Jackson, Mississippi

This map contains portions of the following USGS 1:24,000 Topographic Quadrangles: Gilliam, Dixie

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.



United States Department of the Interior



Bureau of Land Management

Southeastern States Field Office

411 Briarwood Drive, Suite 404

Jackson, Mississippi 39206

<http://www.es.blm.gov>

IN REPLY REFER TO:

8100 (020) JMS Rapides Parishes, LA EOI 1711

Dec. 10, 2012

Ms. Pam Breaux
State Historic Preservation Officer
Louisiana Office of Cultural Development
P.O. Box 44247
Baton Rouge, LA 70804-44247

Dear Ms. Breaux:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 1711) to lease federal minerals under privately owned surface, i.e. split-estate minerals. The Bureau's reasonably foreseeable development scenario (RFD) for this proposed lease is 4 wells from 1 pad to be constructed on private surface with no more than 6.42 acres total, this includes access road, pipelines and pad, to be disturbed accessing federal minerals. The legal locations of the approximately 22.16 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian

Rapides Parish (Latanier, Woodworth East, Alexandria and Libuse Quadrangles)

T. 3 N., R. 1 E., Sec. 9, Entire Section (Approx. 22.16 ac.)

Development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners. The BLM's surface responsibilities rest only within the boundaries of any proposed development.

A review of the Louisiana Division of Archaeology online site files shows no sites within the lease sale area although there are some sites within one mile of the proposed lease area. An archaeological survey will be required before any development and or ground disturbing activities begin. Also the report must be approved by both the Louisiana Division of



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Archaeology and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.

Your concurrence of these procedures for Section 106 compliance is requested in 30 days. If you have any questions or concerns, please contact John M. Sullivan, Archeologist, at (601) 977-5439 or email at John_M_Sullivan@BLM.Gov.

Sincerely,
Original Signed
Duane Winters

Duane Winters,
Assistant Field Manager
Division of Lands and Renewable Resources

Enclosure
1 Map

bc:

JFO CF & RF

ES RF

DWinters

AMcCartney

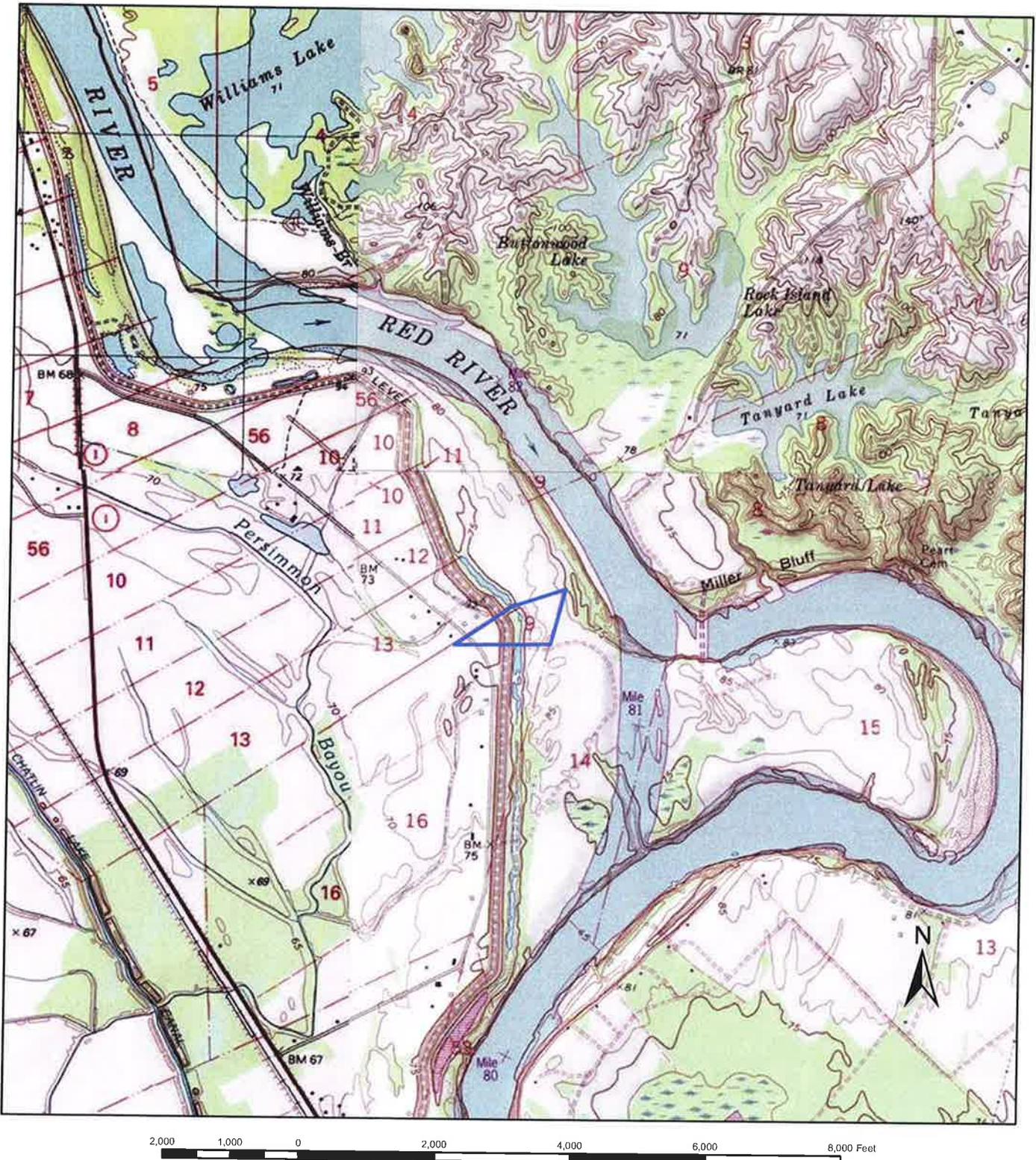
ES020: JMSullivan:12/10/12:601-977-5400:Rapides.T.3N.R.1E.Sec.9.EOI 1711.SHPO.Ltr



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Proposed Federal Oil and Gas Lease
EOI 1711



 Proposed Lease Area

Proposed Lease Area:
Rapides Parish, Louisiana, Louisiana Meridian
T. 3N., R. 1E., Sec.9, Entire section
Approximately 22.16 acres.

U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi

This map contains portions of the following USGS 1:24,000 Topographic Quadrangles: Latanier, Woodward East, Alexandria, Libuse

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.



United States Department of the Interior



Bureau of Land Management

Southeastern States Field Office

411 Briarwood Drive, Suite 404

Jackson, Mississippi 39206

<http://www.es.blm.gov>

IN REPLY REFER TO: 8100 (020) JMS Caddo Parish EOI 1714

Dec. 10, 2012

Chairman Earl Barbry, Sr.
Tunica-Biloxi Tribe of Louisiana
P.O. Box 332
Marksville, Louisiana 70523

Dear Chairman Barbry:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 1714) to lease federal minerals under privately owned surface, i.e. split-estate minerals. The Bureau's Reasonably Foreseeable Development Scenario for this proposed lease is multiple horizontal wells from one pad to be constructed on private surface with no more than 6.77 acres total, access road and pads, to be disturbed accessing federal minerals. The legal locations of the approximately 91.56 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian

Caddo Parish (Potters Point and Moorningsport Quadrangles)

T. 20 N., R. 16 W., Sec. 32, Lots 1 and 3 (Approx. 91.56 ac.)

However, proposed development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners. The BLM's surface responsibilities rest only within the boundaries of any proposed development. A review of the Louisiana Division of Archaeology online site files shows sites within one mile of the proposed lease sale.

A section of the lease document will state that before the BLM approves any development proposal, a survey that meets current professional standards and a report that meets Louisiana Division of Archaeology requirements. The report must be approved by both the Louisiana



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Division of Archaeology and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.

In addition, a stipulation will be included in the lease document which covers accidental discovery and requires additional consultation with you and the Louisiana Division of Archaeology. This stipulation will also be included in the permitting documents when, or if, a development proposal is submitted.

If you are aware of any sites within the proposed lease area which are currently being used for religious purposes or are recognized as sacred sites on these privately owned lands, please let us know so that additional consultation can be conducted and so that impacts will not occur. As provided by law, any specific location information will be held in confidence. Your information is requested within 30 days.

If you have any questions or comments, please contact John M. Sullivan, Archeologist, at (601) 977-5439 or John_M_Sullivan@BLM.Gov.

Sincerely,
Original Signed
Duane Winters

Duane Winters
 Assistant Field Manager, Division of Lands and
 Renewable Resources
 Acting for Bruce Dawson,
 Field Manager

Enclosures
 1 - Map

cc via email: Mr. Earl Barbry, Jr., Tribal Historic Preservation Officer

bc:
 SSFO CF & RF
 ES RF
 DWinters
~~AMcCartney~~

ES020: JMSullivan:12/10/12:601-977-5400:Caddo.T.20N.R.16W.Sec.32.EOI 1714.NA.Ltr



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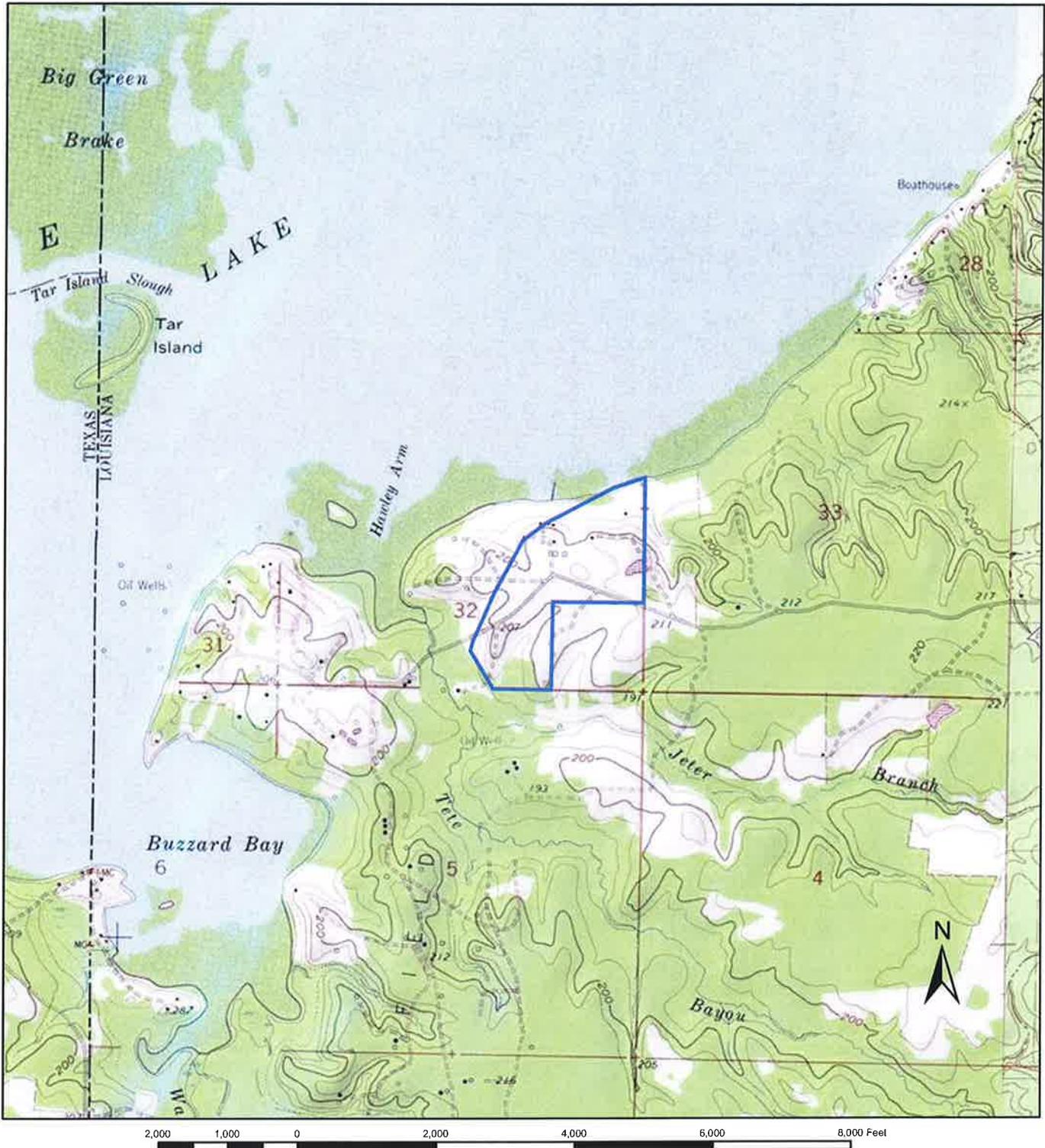
| Original to: | cc: to these: |
|--|---|
| Mr. Earl Barbry, Sr., Chairman Tunica-Biloxi Tribe of Louisiana P.O. Box 331 Marksville, Louisiana 70523 | Mr. Earl Barbry, Jr., Tribal Historic Preservation Officer Tunica - Biloxi Tribe 151 Melacon Dr. Marksville, LA 71351 earlii@tunica.org |
| Oscola Clayton Sylestine, Chairman Alabama-Coushatta Tribe of Texas 571 State Park Road 56 Livingston, TX 77351 | Bryant J. Celestine, Historical Preservation Alabama-Coushatta Tribe of Texas 571 State Park Road 56 Livingston, TX 77351 celestine.bryant@actribe.org |
| Kevin Sickey, Chairman Coushatta Indian Tribe P.O. Box 818 Elton, LA 70532 | Send Hard Copy Linda Langley, Tribal Historic Preservation Officer Mike Tarpley, Deputy THPO P.O. Box 818 Elton, LA 70532 llangley@mcneese.edu ; kokua.aina57@gmail.com |
| John Paul Darden, Chairman Chitimacha Tribe of Louisiana P.O. Box 661 Charenton, LA 70523 | Kimberly S. Walden, Tribal Historic Preservation Officer Chitimacha Tribe of Louisiana P.O. Box 661 Charenton, LA 70523 kim@chitimacha.gov |
| John Berrey, Chairman Quapaw Tribe of Oklahoma P.O. Box 765 Quapaw, Oklahoma 74345 | Jean Ann Lambert, Cultural/Historic Preservation Office P.O. Box 1556 Miami, OK 74355 jlambert@quapawtribe.com |
| Brenda Shemayne Edwards, Chairwoman Caddo Nation of Oklahoma P.O. Box 487 Binger, Oklahoma 73009 | Mr. Robert Cast, Tribal Historic Preservation Officer Caddo Nation of Oklahoma P.O. Box 487 Binger, OK 73009 rcast@caddonation.org ; mboatone@caddonation.org |
| A.D. Ellis, Principal Chief Muscogee (Creek) Nation of Oklahoma P.O. Box 580 Okmulgee, Oklahoma 74447 | Emman Spain, Cultural/Historic Preservation Office Muscogee (Creek) Nation of Oklahoma P.O. Box 580 Okmulgee, OK 74447 espain@muscogeenation-nsn.gov |
| Leonard Harjo, Principal Chief Seminole Nation of Oklahoma P.O. Box 1498 Wewoka, Oklahoma 74884 | Natalie Deer, Cultural Preservation Office P.O. Box 1768 Seminole, OK 74868-1768 ndeere@seminolenation.com |



| Original to: | cc: to these: |
|--|---|
| <p>Only send email to Preservation Officer Tarpie Yargee, Chief Alabama-Quassarte Tribal Town P.O. Box 187 Wetumka, OK 74883</p> | <p>Augustine Asbury, 2nd Chief/ Cultural Preservation Officer P.O. Box 187 Wetumka, OK 74883 aqttcultural@yahoo.com</p> |
| <p>Only send email to Preservation Officer Gregory Pyle, Chief Choctaw Nation of Oklahoma Drawer 1210 Durant, Oklahoma 74702-1210</p> | <p>Ian Thompson PhD, RPA, THPO, Tribal Archaeologist, Director Historic Preservation Dept. Johnnie L. Jacobs, Section 106 Coordinator 580-775-0914, 580-920-3181 (Fax) 1-800-522-6170 ext. 2216 P.O. Drawer 1210 Durant, OK 74702 ithompson@choctawnation.com; jjacobs@choctawnation.com</p> |
| <p>B. Cheryl Smith, Chief Jena Band of Choctaw P.O. Box 2717 Jena LA 71342</p> | <p>Dana Masters, Tribal Council and Cultural Preservation Officer Jena Band of Choctaw P.O. Box 2717 Jena LA 71342 danammasters@aol.com</p> |
| <p>Phyliss J. Anderson, Chief Mississippi Band of Choctaw Indians P.O. Box 6010 Philadelphia, MS 39350</p> | <p>Mr. Ken Carleton, Tribal Historic Preservation Officer Mississippi Band of Choctaw Indians P.O. Box 6257 Philadelphia, MS 39350 kcarleton@choctaw.org</p> |
| <p>George Scott, Mekko Thlopthlocco Tribal Town P.O. Box 188 Okemah, Oklahoma 74859</p> | <p>Charles Coleman, Cultural/Historic Preservation Office P.O. Box 188 Okemah, Oklahoma 74859 chasc Coleman@prodgy.net</p> |



**Proposed Federal Oil and Gas Lease
EOI 1714**



 Proposed Lease Area

Proposed Lease Area:
Caddo Parish, Louisiana, Louisiana Meridian
T. 20N., R. 16W., Sec.32, Lots 1 and 3
Approximately 91.56 acres.

**U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi**

This map contains portions of the following USGS 1:24,000 Topographic Quadrangles: Potters Point, Mooringsport

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.



United States Department of the Interior



Bureau of Land Management

Southeastern States Field Office

411 Briarwood Drive, Suite 404

Jackson, Mississippi 39206

<http://www.es.blm.gov>

IN REPLY REFER TO: 8100 (020) JMS Caddo Parish EOI 1714

Dec. 10, 2012

Ms. Pam Breaux
State Historic Preservation Officer
Louisiana Office of Cultural Development
P.O. Box 44247
Baton Rouge, LA 70804-44247

Dear Ms. Breaux:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 1714) to lease federal minerals under privately owned surface, i.e. split-estate minerals. The Bureau's Reasonably Foreseeable Development Scenario for this proposed lease is multiple horizontal wells from one pad to be constructed on private surface with no more than 6.77 acres total, access road and pads, to be disturbed accessing federal minerals. The legal locations of the approximately 91.56 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian

Caddo Parish (Potters Point and Moorningsport Quadrangles)

T. 20 N., R. 16 W., Sec. 32, Lots 1 and 3 (Approx. 91.56 ac.)

However, proposed development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners. The BLM's surface responsibilities rest only within the boundaries of any proposed development. A review of the Louisiana Division of Archaeology online site files shows sites within one mile of the proposed lease sale.

A section of the lease document will state that before the BLM approves any development proposal, a survey that meets current professional standards and a report that meets Louisiana Division of Archaeology requirements. The report must be approved by both the Louisiana



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Division of Archaeology and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.

Your concurrence of these procedures for Section 106 compliance is requested in 30 days. If you have any questions or concerns, please contact John M. Sullivan, Archeologist, at (601) 977-5439 or email at John_M_Sullivan@BLM.Gov.

Sincerely,

**Original Signed
Duane Winters**

Duane Winters
Assistant Field Manager
Division of Lands and Renewable Resources

Enclosures
1- Map

bc:

SSFO CF & RF

ES RF

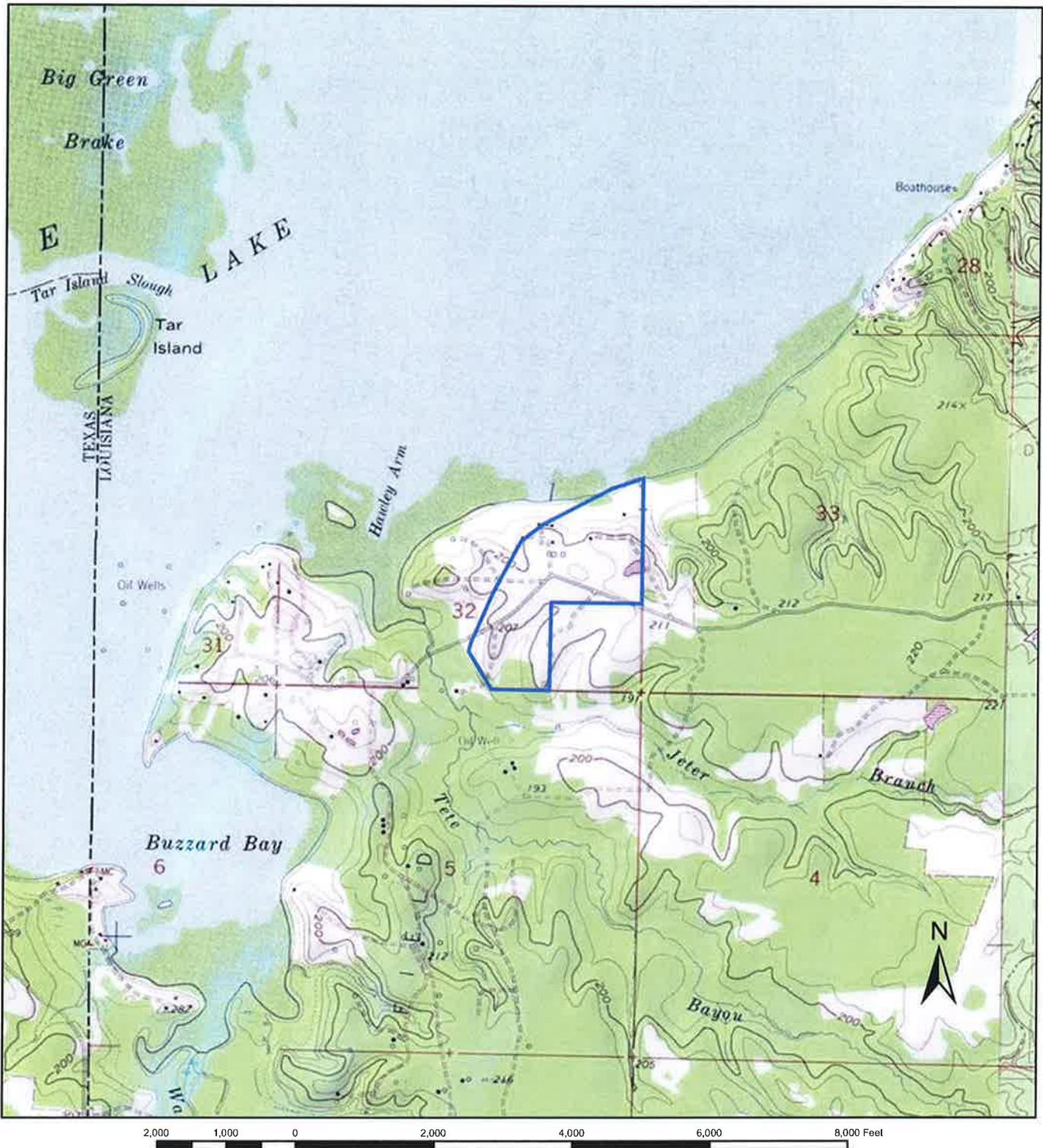
DWinters

AMcCartney

ES020: JMSullivan:12/10/12:601-977-5400:Caddo.T.20N.R.16W.Sec.32.EOI 1714.SHPO.Ltr



**Proposed Federal Oil and Gas Lease
EOI 1714**



 Proposed Lease Area

Proposed Lease Area:
Caddo Parish, Louisiana, Louisiana Meridian
T. 20N., R. 16W., Sec.32, Lots 1 and 3
Approximately 91.56 acres.

**U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi**

This map contains portions of the following USGS 1:24,000 Topographic Quadrangles: Potters Point, Moorningsport

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.



United States Department of the Interior



Bureau of Land Management

Southeastern States Field Office

411 Briarwood Drive, Suite 404

Jackson, Mississippi 39206

<http://www.es.blm.gov>

IN REPLY REFER TO: 8100 (020) JMS Caddo Parish EOI 1715

Dec. 10, 2012

Chairman Earl Barbry, Sr.
Tunica-Biloxi Tribe of Louisiana
P.O. Box 332
Marksville, Louisiana 70523

Dear Chairman Barbry:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 1715) to lease federal minerals under privately owned surface, i.e. split-estate minerals. The Bureau's Reasonably Foreseeable Development Scenario for this proposed lease is multiple horizontal wells from one pad to be constructed on private surface with no more than 6.57 acres total, access road and pads, to be disturbed accessing federal minerals. The legal locations of the approximately 9.1 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian
Caddo Parish (Moorningsport Quadrangle)
T. 20 N., R. 16 W., Sec. 36, Lots 1 (Approx. 9.1 ac.)

However, proposed development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners. The BLM's surface responsibilities rest only within the boundaries of any proposed development. A review of the Louisiana Division of Archaeology online site files shows sites within one mile of the proposed lease sale.

A section of the lease document will state that before the BLM approves any development proposal, a survey that meets current professional standards and a report that meets Louisiana Division of Archaeology requirements. The report must be approved by both the Louisiana



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Division of Archaeology and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.

In addition, a stipulation will be included in the lease document which covers accidental discovery and requires additional consultation with you and the Louisiana Division of Archaeology. This stipulation will also be included in the permitting documents when, or if, a development proposal is submitted.

If you are aware of any sites within the proposed lease area which are currently being used for religious purposes or are recognized as sacred sites on these privately owned lands, please let us know so that additional consultation can be conducted and so that impacts will not occur. As provided by law, any specific location information will be held in confidence. Your information is requested within 30 days.

If you have any questions or comments, please contact John M. Sullivan, Archeologist, at (601) 977-5439 or John_M_Sullivan@BLM.Gov.

Sincerely,

Original Signed
Duane Winters

Duane Winters
Assistant Field Manager, Division of Lands and
Renewable Resources
Acting for Bruce Dawson,
Field Manager

Enclosures
1 - Map

cc via email: Mr. Earl Barbry, Jr., Tribal Historic Preservation Officer

bc:

SSFO CF & RF

ES RF

DWinters

AMcCartney

ES020: JMSullivan:12/10/12:601-977-5400:Caddo.T.20N.R.16W.Sec.36.EOI 1715.NA.Ltr



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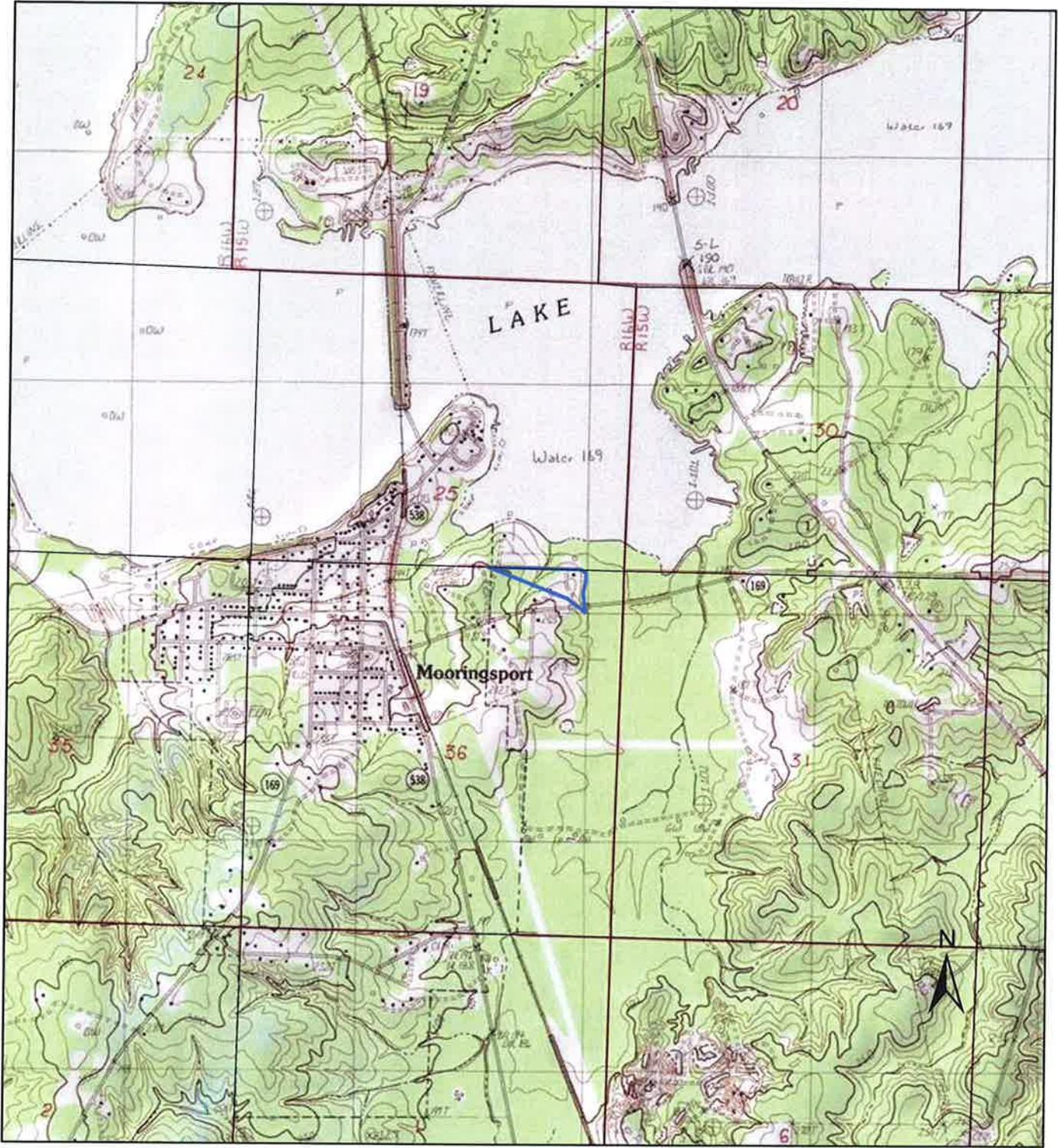
| Original to: | cc: to these: |
|--|---|
| Mr. Earl Barbry, Sr., Chairman Tunica-Biloxi Tribe of Louisiana P.O. Box 331 Marksville, Louisiana 70523 | Mr. Earl Barbry, Jr., Tribal Historic Preservation Officer Tunica - Biloxi Tribe 151 Melacon Dr. Marksville, LA 71351 earlii@tunica.org |
| Oscola Clayton Sylestine, Chairman Alabama-Coushatta Tribe of Texas 571 State Park Road 56 Livingston, TX 77351 | Bryant J. Celestine, Historical Preservation Alabama-Coushatta Tribe of Texas 571 State Park Road 56 Livingston, TX 77351 celestine.bryant@actribe.org |
| Kevin Sickey, Chairman Coushatta Indian Tribe P.O. Box 818 Elton, LA 70532 | Send Hard Copy Linda Langley, Tribal Historic Preservation Officer Mike Tarpley, Deputy THPO P.O. Box 818 Elton, LA 70532 llangley@mcneese.edu ; kokua.aina57@gmail.com |
| John Paul Darden, Chairman Chitimacha Tribe of Louisiana P.O. Box 661 Charenton, LA 70523 | Kimberly S. Walden, Tribal Historic Preservation Officer Chitimacha Tribe of Louisiana P.O. Box 661 Charenton, LA 70523 kim@chitimacha.gov |
| John Berrey, Chairman Quapaw Tribe of Oklahoma P.O. Box 765 Quapaw, Oklahoma 74345 | Jean Ann Lambert, Cultural/Historic Preservation Office P.O. Box 1556 Miami, OK 74355 jlambert@quapawtribe.com |
| Brenda Shemayne Edwards, Chairwoman Caddo Nation of Oklahoma P.O. Box 487 Binger, Oklahoma 73009 | Mr. Robert Cast, Tribal Historic Preservation Officer Caddo Nation of Oklahoma P.O. Box 487 Binger, OK 73009 rcast@caddonation.org ; mboatone@caddonation.org |
| A.D. Ellis, Principal Chief Muscogee (Creek) Nation of Oklahoma P.O. Box 580 Okmulgee, Oklahoma 74447 | Emman Spain, Cultural/Historic Preservation Office Muscogee (Creek) Nation of Oklahoma P.O. Box 580 Okmulgee, OK 74447 espain@muscogeenation-nsn.gov |
| Leonard Harjo, Principal Chief Seminole Nation of Oklahoma P.O. Box 1498 Wewoka, Oklahoma 74884 | Natalie Deer, Cultural Preservation Office P.O. Box 1768 Seminole, OK 74868-1768 ndeere@seminolenation.com |



| Original to: | cc: to these: |
|--|---|
| <p>Only send email to Preservation Officer Tarpie Yargee, Chief Alabama-Quassarte Tribal Town P.O. Box 187 Wetumka, OK 74883</p> | <p>Augustine Asbury, 2nd Chief/ Cultural Preservation Officer P.O. Box 187 Wetumka, OK 74883 aqttcultural@yahoo.com</p> |
| <p>Only send email to Preservation Officer Gregory Pyle, Chief Choctaw Nation of Oklahoma Drawer 1210 Durant, Oklahoma 74702-1210</p> | <p>Ian Thompson PhD, RPA, THPO, Tribal Archaeologist, Director Historic Preservation Dept. Johnnie L. Jacobs, Section 106 Coordinator 580-775-0914, 580-920-3181 (Fax) 1-800-522-6170 ext. 2216 P.O. Drawer 1210 Durant, OK 74702 ithompson@choctawnation.com; jjacobs@choctawnation.com</p> |
| <p>B. Cheryl Smith, Chief Jena Band of Choctaw P.O. Box 2717 Jena LA 71342</p> | <p>Dana Masters, Tribal Council and Cultural Preservation Officer Jena Band of Choctaw P.O. Box 2717 Jena LA 71342 danammasters@aol.com</p> |
| <p>Phyliss J. Anderson, Chief Mississippi Band of Choctaw Indians P.O. Box 6010 Philadelphia, MS 39350</p> | <p>Mr. Ken Carleton, Tribal Historic Preservation Officer Mississippi Band of Choctaw Indians P.O. Box 6257 Philadelphia, MS 39350 kcarleton@choctaw.org</p> |
| <p>George Scott, Mekko Thlopthlocco Tribal Town P.O. Box 188 Okemah, Oklahoma 74859</p> | <p>Charles Coleman, Cultural/Historic Preservation Office P.O. Box 188 Okemah, Oklahoma 74859 chascoleman@prodgy.net</p> |



**Proposed Federal Oil and Gas Lease
EOI 1715**



 Proposed Lease Area

Proposed Lease Area:
Caddo Parish, Louisiana, Louisiana Meridian
T. 20N., R. 16W., Sec.36 Lots 1
Approximately 9.1 acres.

**U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi**

This map contains portions of the following USGS 1:24,000 Topographic Quadrangle: Mooringsport

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United States Department of the Interior



Bureau of Land Management

Southeastern States Field Office

411 Briarwood Drive, Suite 404

Jackson, Mississippi 39206

<http://www.es.blm.gov>

IN REPLY REFER TO: 8100 (020) JMS Caddo Parish EOI 1715

Dec. 10, 2012

Ms. Pam Breaux
State Historic Preservation Officer
Louisiana Office of Cultural Development
P.O. Box 44247
Baton Rouge, LA 70804-44247

Dear Ms. Breaux:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 1715) to lease federal minerals under privately owned surface, i.e. split-estate minerals. The Bureau's Reasonably Foreseeable Development Scenario for this proposed lease is multiple horizontal wells from one pad to be constructed on private surface with no more than 6.57 acres total, access road and pads, to be disturbed accessing federal minerals. The legal locations of the approximately 9.1 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian

Caddo Parish (Moorningsport Quadrangle)

T. 20 N., R. 16 W., Sec. 36, Lots 1 (Approx. 9.1 ac.)

However, proposed development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners. The BLM's surface responsibilities rest only within the boundaries of any proposed development. A review of the Louisiana Division of Archaeology online site files shows sites within one mile of the proposed lease sale.

A section of the lease document will state that before the BLM approves any development proposal, a survey that meets current professional standards and a report that meets Louisiana Division of Archaeology requirements. The report must be approved by both the Louisiana



Division of Archaeology and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.

Your concurrence of these procedures for Section 106 compliance is requested in 30 days. If you have any questions or concerns, please contact John M. Sullivan, Archeologist, at (601) 977-5439 or email at John_M_Sullivan@BLM.Gov.

Sincerely,

Original Signed
Duane Winters

Duane Winters
Assistant Field Manager
Division of Lands and Renewable Resources

Enclosures
1- Map

bc:

SSFO CF & RF

ES RF

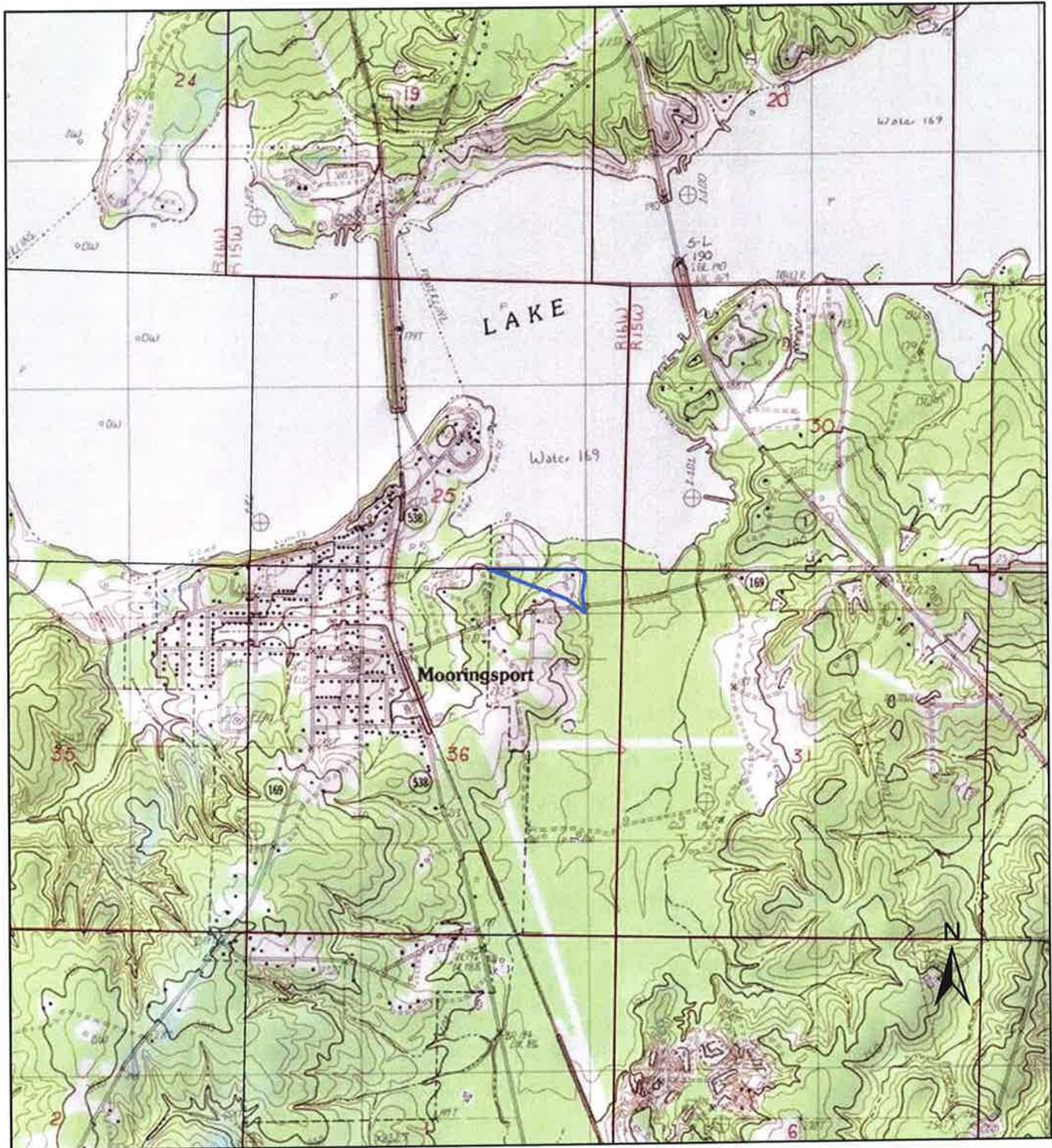
DWinters

~~AMcCartney~~

ES020: JMSullivan:12/10/12:601-977-5400:Caddo.T.20N.R.16W.Sec.36.EOI 1715.SHPO.Ltr



Proposed Federal Oil and Gas Lease
EOI 1715



 Proposed Lease Area

Proposed Lease Area:
Caddo Parish, Louisiana, Louisiana Meridian
T. 20N., R. 16W., Sec.36 Lots 1
Approximately 9.1 acres.

U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi

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United States Department of the Interior



Bureau of Land Management

Southeastern States Field Office

411 Briarwood Drive, Suite 404

Jackson, Mississippi 39206

<http://www.es.blm.gov>

IN REPLY REFER TO: 8100 (020) JMS Caddo Parish EOI 1716

Dec. 10, 2012

Chairman Earl Barbry, Sr.
Tunica-Biloxi Tribe of Louisiana
P.O. Box 332
Marksville, Louisiana 70523

Dear Chairman Barbry:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 1716) to lease federal minerals under privately owned surface, i.e. split-estate minerals. The Bureau's Reasonably Foreseeable Development Scenario for this proposed lease is multiple horizontal wells from one pad to be constructed on private surface with no more than 28.08 acres total, access road and pads, to be disturbed accessing federal minerals. The legal locations of the approximately 6.08 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian

Caddo Parish (Potters Point Quadrangle)

T. 19 N., R. 16 W., Sec. 36, Lots 1 (Approx. 9.1 ac.)

However, proposed development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners. The BLM's surface responsibilities rest only within the boundaries of any proposed development. A review of the Louisiana Division of Archaeology online site files shows sites within one mile of the proposed lease sale.

A section of the lease document will state that before the BLM approves any development proposal, a survey that meets current professional standards and a report that meets Louisiana Division of Archaeology requirements. The report must be approved by both the Louisiana



WILD HORSES & BURROS • CADASTRAL SURVEY • GENERAL LAND OFFICE RECORDS • MINERALS • RENEWABLE RESOURCES



Division of Archaeology and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.

In addition, a stipulation will be included in the lease document which covers accidental discovery and requires additional consultation with you and the Louisiana Division of Archaeology. This stipulation will also be included in the permitting documents when, or if, a development proposal is submitted.

If you are aware of any sites within the proposed lease area which are currently being used for religious purposes or are recognized as sacred sites on these privately owned lands, please let us know so that additional consultation can be conducted and so that impacts will not occur. As provided by law, any specific location information will be held in confidence. Your information is requested within 30 days.

If you have any questions or comments, please contact John M. Sullivan, Archeologist, at (601) 977-5439 or John_M_Sullivan@BLM.Gov.

Sincerely,

Original Signed
Duane Winters
Duane Winters

Assistant Field Manager, Division of Lands and
Renewable Resources

Acting for Bruce Dawson,
Field Manager

Enclosures

1 - Map

cc via email: Mr. Earl Barbry, Jr., Tribal Historic Preservation Officer

bc:

SSFO CF & RF

ES RF

DWinters

AMcCartney

ES020: JMSullivan:12/10/12:601-977-5400:Caddo.T.19N.R.16W.Sec.6.EOI 1716.NA.Ltr



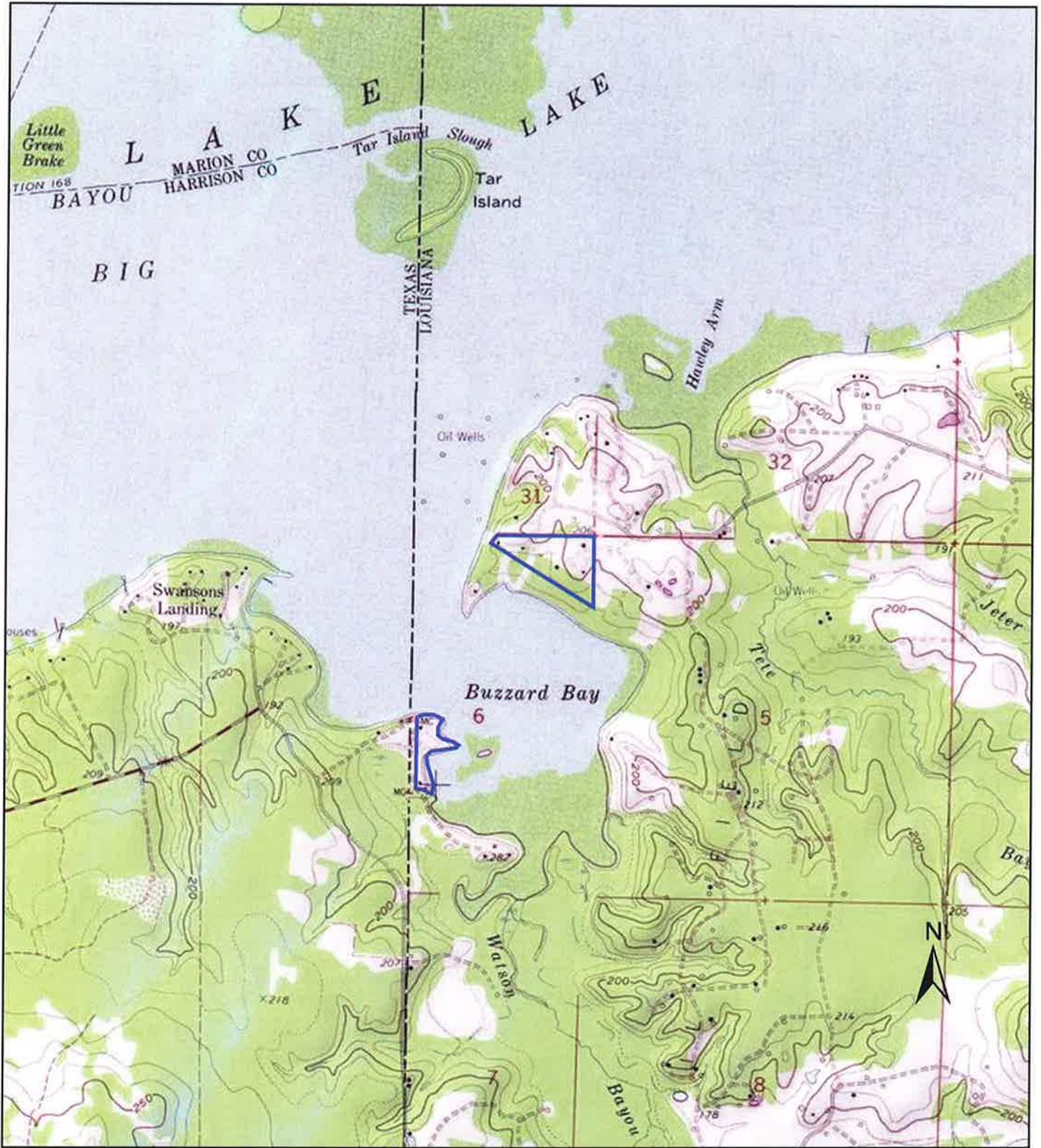
| Original to: | cc: to these: |
|--|---|
| Mr. Earl Barbry, Sr., Chairman Tunica-Biloxi Tribe of Louisiana P.O. Box 331 Marksville, Louisiana 70523 | Mr. Earl Barbry, Jr., Tribal Historic Preservation Officer Tunica - Biloxi Tribe 151 Melacon Dr. Marksville, LA 71351 earlii@tunica.org |
| Oscola Clayton Sylestine, Chairman Alabama-Coushatta Tribe of Texas 571 State Park Road 56 Livingston, TX 77351 | Bryant J. Celestine, Historical Preservation Alabama-Coushatta Tribe of Texas 571 State Park Road 56 Livingston, TX 77351 celestine.bryant@actribe.org |
| Kevin Sickey, Chairman Coushatta Indian Tribe P.O. Box 818 Elton, LA 70532 | Send Hard Copy Linda Langley, Tribal Historic Preservation Officer Mike Tarpley, Deputy THPO P.O. Box 818 Elton, LA 70532 llangley@mcneese.edu ; kokua.aina57@gmail.com |
| John Paul Darden, Chairman Chitimacha Tribe of Louisiana P.O. Box 661 Charenton, LA 70523 | Kimberly S. Walden, Tribal Historic Preservation Officer Chitimacha Tribe of Louisiana P.O. Box 661 Charenton, LA 70523 kim@chitimacha.gov |
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| Brenda Shemayme Edwards, Chairwoman Caddo Nation of Oklahoma P.O. Box 487 Binger, Oklahoma 73009 | Mr. Robert Cast, Tribal Historic Preservation Officer Caddo Nation of Oklahoma P.O. Box 487 Binger, OK 73009 rcast@caddonation.org ; mboatone@caddonation.org |
| A.D. Ellis, Principal Chief Muscogee (Creek) Nation of Oklahoma P.O. Box 580 Okmulgee, Oklahoma 74447 | Emman Spain, Cultural/Historic Preservation Office Muscogee (Creek) Nation of Oklahoma P.O. Box 580 Okmulgee, OK 74447 espain@muscogeenation-nsn.gov |
| Leonard Harjo, Principal Chief Seminole Nation of Oklahoma P.O. Box 1498 Wewoka, Oklahoma 74884 | Natalie Deer, Cultural Preservation Office P.O. Box 1768 Seminole, OK 74868-1768 ndeere@seminolenation.com |



| Original to: | cc: to these: |
|--|---|
| <p>Only send email to Preservation Officer Tarpie Yargee, Chief Alabama-Quassarte Tribal Town P.O. Box 187 Wetumka, OK 74883</p> | <p>Augustine Asbury, 2nd Chief/ Cultural Preservation Officer P.O. Box 187 Wetumka, OK 74883 aqttcultural@yahoo.com</p> |
| <p>Only send email to Preservation Officer Gregory Pyle, Chief Choctaw Nation of Oklahoma Drawer 1210 Durant, Oklahoma 74702-1210</p> | <p>Ian Thompson PhD, RPA, THPO, Tribal Archaeologist, Director Historic Preservation Dept. Johnnie L. Jacobs, Section 106 Coordinator 580-775-0914, 580-920-3181 (Fax) 1-800-522-6170 ext. 2216 P.O. Drawer 1210 Durant, OK 74702 ithompson@choctawnation.com; jjacobs@choctawnation.com</p> |
| <p>B. Cheryl Smith, Chief Jena Band of Choctaw P.O. Box 2717 Jena LA 71342</p> | <p>Dana Masters, Tribal Council and Cultural Preservation Officer Jena Band of Choctaw P.O. Box 2717 Jena LA 71342 danammasters@aol.com</p> |
| <p>Phyliss J. Anderson, Chief Mississippi Band of Choctaw Indians P.O. Box 6010 Philadelphia, MS 39350</p> | <p>Mr. Ken Carleton, Tribal Historic Preservation Officer Mississippi Band of Choctaw Indians P.O. Box 6257 Philadelphia, MS 39350 kcarleton@choctaw.org</p> |
| <p>George Scott, Mekko Thlopthlocco Tribal Town P.O. Box 188 Okemah, Oklahoma 74859</p> | <p>Charles Coleman, Cultural/Historic Preservation Office P.O. Box 188 Okemah, Oklahoma 74859 chascoleman@prodgy.net</p> |



Proposed Federal Oil and Gas Lease
EOI 1716



 Proposed Lease Area

Proposed Lease Area:
Caddo Parish, Louisiana, Louisiana Meridian
T. 19N., R. 16W., Sec.6, Lots 1 and Fractional
NE Quarter
Approximately 28.08 acres.

U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi

This map contains portions of the following USGS 1:24,000 Topographic Quadrangle: Potters Point

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.



United States Department of the Interior



Bureau of Land Management

Southeastern States Field Office

411 Briarwood Drive, Suite 404

Jackson, Mississippi 39206

<http://www.es.blm.gov>

IN REPLY REFER TO: 8100 (020) JMS Caddo Parish EOI 1716

Dec. 10, 2012

Ms. Pam Breaux
State Historic Preservation Officer
Louisiana Office of Cultural Development
P.O. Box 44247
Baton Rouge, LA 70804-44247

Dear Ms. Breaux:

The Bureau of Land Management (BLM) has received an Expression of Interest (EOI 1716) to lease federal minerals under privately owned surface, i.e. split-estate minerals. The Bureau's Reasonably Foreseeable Development Scenario for this proposed lease is multiple horizontal wells from one pad to be constructed on private surface with no more than 28.08 acres total, access road and pads, to be disturbed accessing federal minerals. The legal locations of the approximately 6.08 acres of federal mineral tracts are as follows (map enclosed):

Louisiana Meridian

Caddo Parish (Potters Point Quadrangle)

T. 19 N., R. 16 W., Sec. 6, Lots 1 and fractional NENE (Approx. 9.1 ac.)

However, proposed development locations have not been determined on a site-specific basis. Specific locations proposed for development are determined by the developer and surface owners. The BLM's surface responsibilities rest only within the boundaries of any proposed development. A review of the Louisiana Division of Archaeology online site files shows sites within one mile of the proposed lease sale.

A section of the lease document will state that before the BLM approves any development proposal, a survey that meets current professional standards and a report that meets Louisiana Division of Archaeology requirements. The report must be approved by both the Louisiana



Division of Archaeology and the BLM before any ground disturbing activities take place. Any needed consultation will be concluded before ground-disturbing activities begin.

Your concurrence of these procedures for Section 106 compliance is requested in 30 days. If you have any questions or concerns, please contact John M. Sullivan, Archeologist, at (601) 977-5439 or email at John_M_Sullivan@BLM.Gov.

Sincerely,

**Original Signed
Duane Winters**

Duane Winters
Assistant Field Manager
Division of Lands and Renewable Resources

Enclosures
1- Map

bc:

SSFO CF & RF

ES RF

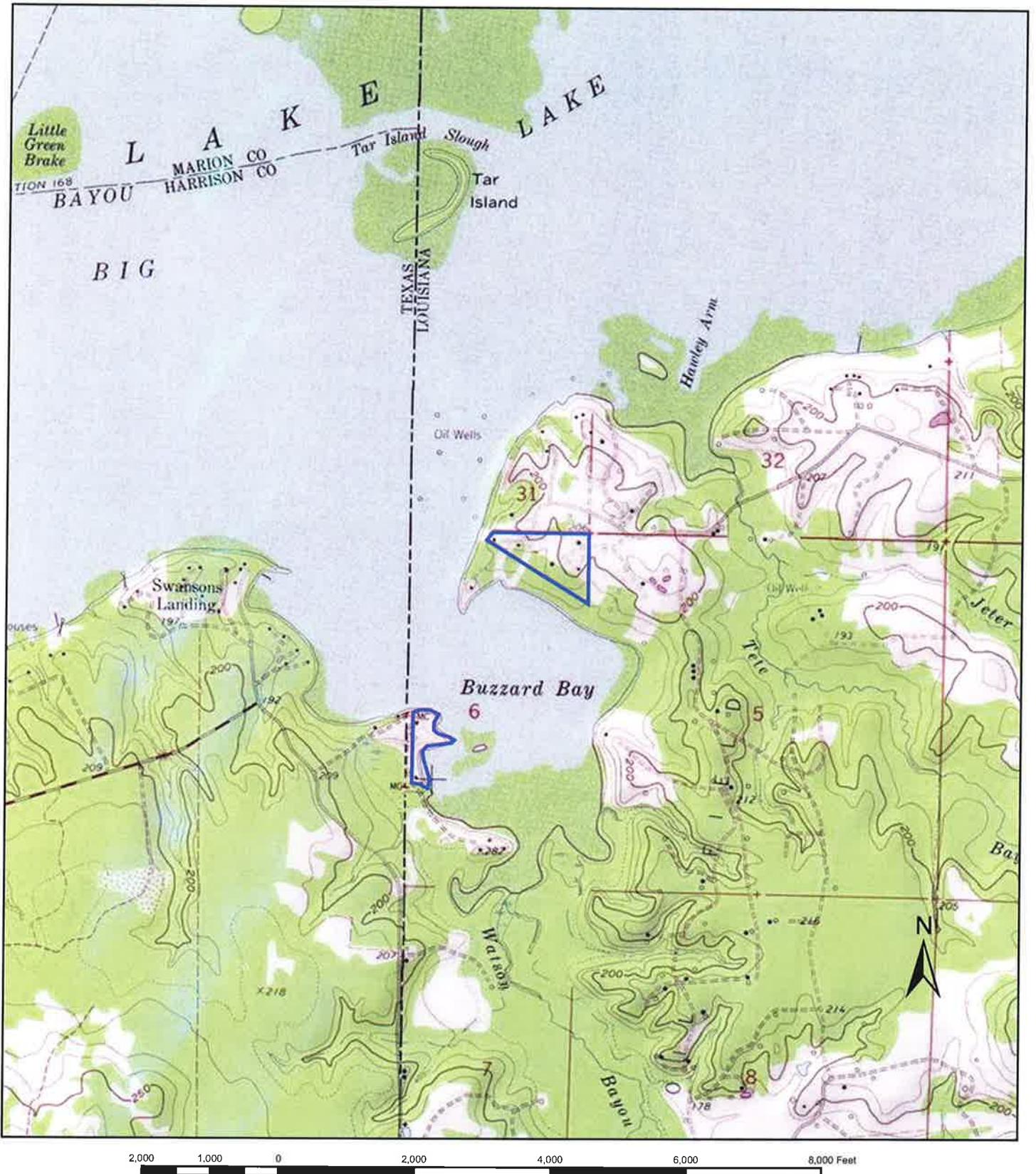
DWinters

~~AMcCartney~~

ES020: JMSullivan:12/10/12:601-977-5400:Caddo.T.19N.R.16W.Sec.6.EOI 1716.SHPO.Ltr



Proposed Federal Oil and Gas Lease
EOI 1716



 Proposed Lease Area

Proposed Lease Area:
Caddo Parish, Louisiana, Louisiana Meridian
T. 19N., R. 16W., Sec. 6, Lots 1 and Fractional
NE Quarter
Approximately 28.08 acres.

U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi

This map contains portions of the following USGS 1:24,000 Topographic Quadrangle: Potters Point

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Appendix D

Reasonably Foreseeable Development Scenario

REASONABLY FORESEEABLE DEVELOPMENT SCENARIO

Case File Number: EOI 1581

Project Number:

Acres: 38.02

Location: Louisiana Meridian, Rapides Parish, T5N, R4W, Sec. 4, SWNW

I. Reasonably Foreseeable Development

A. RFD Baseline Scenario Assumptions and Discussion

Objective horizon is Austin Chalk through Tuscaloosa Marine Shale. Commodity is oil and natural gas.

Federal acreage will be incorporated into a state determined drilling unit. Drilling and production units are 640 to 1280 acres. Project multiple wells, 1 federal well, drilled from 1 pad.

A 30' wide well access road will be constructed consisting of a 16' wide travel surface with a 7' buffer on each side.

If productive, multiple wells may be drilled from the existing pad.

If productive, oil and gas handling and production facilities will be constructed on the existing pad.

If productive, the reserve pit and part of the drill pad will be reclaimed when drilling and completion activities are concluded.

All disturbed acreage will be reclaimed if the well is non-productive.

B. Surface Disturbance Due to Oil and Gas Activity

Access Road: 1.23 acres (1800' X 30')

Well Pad & Pit: 5.74 acres (500' X 500')

Utility and/or Pipeline R.O.W: 0 – use access road ROW

Initial Disturbance: 6.97 acres

Partial Reclamation of Drill Site: 0.46 acres

Net Disturbance for Productive Well: 6.51 acres

REASONABLY FORESEEABLE DEVELOPMENT SCENARIO

Case File Number: EOI 1672

Project Number:

Acres: 39.89 acres

Location: Louisiana Meridian, Caddo Parish, LA, T20N-R14W, Sec. 8, SESW

I. Reasonably Foreseeable Development

A. RFD Baseline Scenario Assumptions and Discussion

Objective horizon is Bossier/Haynesville shale thru Lower Smackover Brown Dense. Commodities are natural gas (Bossier/Haynesville) and crude oil (Lower Smackover)

Federal acreage will be incorporated into a state determined drilling unit. Drilling and production units are variable between 640 and 1280 acres. Project multiple wells to be horizontally drilled from 1 drilling pad.

A 30' wide well access road will be constructed consisting of a 16' wide travel surface with a 7' buffer on each side.

Oil and gas occurrence potential is high. Oil and gas development potential is high.

If productive, oil and gas handling and production facilities will be constructed on the existing pad.

If productive, the reserve pit and part of the drill pad will be reclaimed when drilling and completion activities are concluded.

All disturbed acreage will be reclaimed if the well is non-productive.

B. Surface Disturbance Due to Oil and Gas Activity

Access Road: 0.55 acres (800'X30')

Well Pad & Pit: 5.74 acres (500'X500')

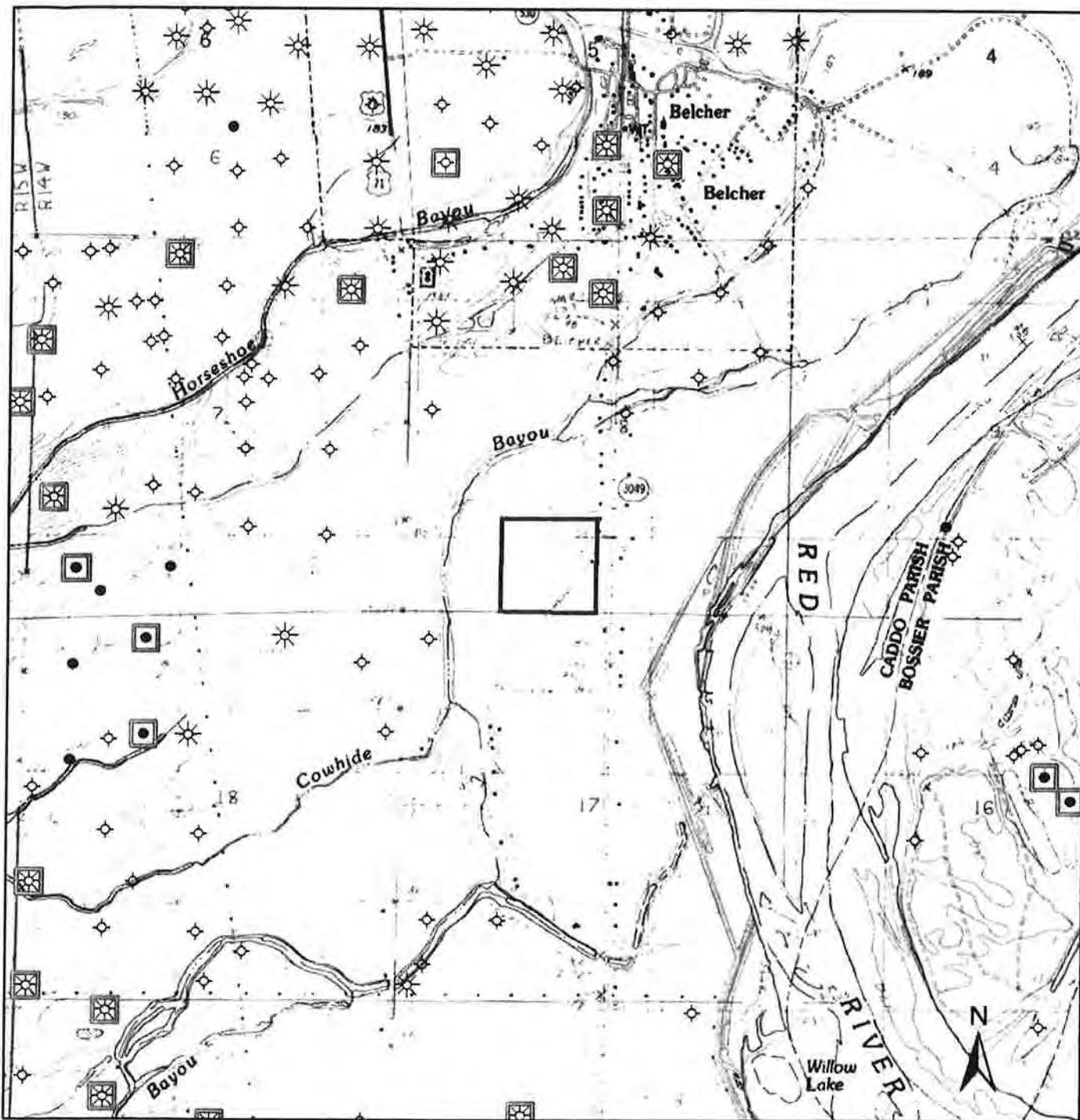
Utility and/or Pipeline R.O.W: 0 – Use access road ROW

Initial Disturbance: 6.29 acres

Partial Reclamation of Drill Site: 0.34 acres (100'X150')

Net Disturbance for Productive Wells: 5.95 acres

**Proposed Federal Oil and Gas Lease
EOI 1672**



2,000 1,000 0 2,000 4,000 6,000 Feet

| | |
|--------------------------|---------------------------------|
| | Proposed Lease Area |
| Oil and Gas Wells | |
| | Dry Hole, Temporarily Abandoned |
| | Oil Well |
| | Gas Well |
| | Inactive Wells |

Proposed Lease Area:
Caddo Parish, Louisiana, Louisiana Meridian
T. 20N., R. 14W., Sec. 8, SESW
Approximately 39.88 acres.

U.S. Department of the Interior
Bureau of Land Management
Eastern States, Jackson Field Office
Jackson, Mississippi

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REASONABLY FORESEEABLE DEVELOPMENT SCENARIO

Case File Number: EOI 1711

Project Number:

Acres: 22.16 acres

Location: Louisiana Meridian, Rapides Parish, T3N-R1E, Sec.9, entire section.

I. Reasonably Foreseeable Development

A. RFD Baseline Scenario Assumptions and Discussion

Objective horizon is Austin Chalk and Tuscaloosa Marine Shale. Commodity is Oil and associated natural gas. Project 4 wells drilled from 1 pad.

Federal acreage will be incorporated into a state determined drilling unit. Drilling and production units are 1280 acres.

A 30' wide well access road will be constructed consisting of a 16' wide travel surface with a 7' buffer on each side.

If productive, multiple wells may be drilled from the existing pad.

If productive, oil and gas handling and production facilities will be constructed on the existing pad.

If productive, the reserve pit and part of the drill pad will be reclaimed when drilling and completion activities are concluded.

All disturbed acreage will be reclaimed if the well is non-productive.

B. Surface Disturbance Due to Oil and Gas Activity

Access Road: 0.68 acres (1000'X30')

Well Pad & Pit: 5.74 acres (500'X500')

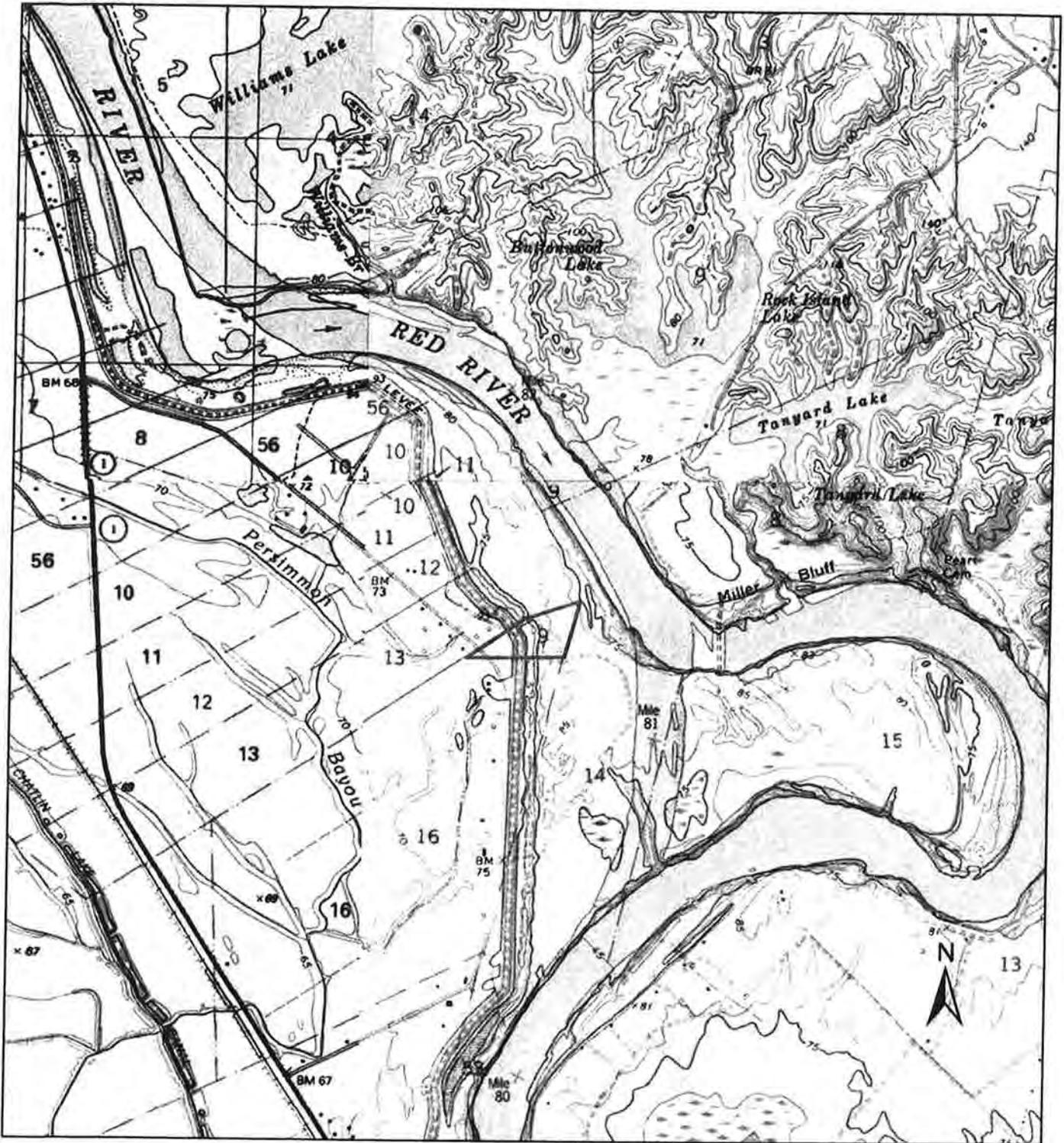
Utility and/or Pipeline R.O.W: 0 – Use access road ROW

Initial Disturbance: 6.42 acres

Partial Reclamation of Drill Site: 0.34 acres

Net Disturbance for Productive Well: 6.08 acres

Proposed Federal Oil and Gas Lease
EOI 1711



 Proposed Lease Area

Proposed Lease Area:
Rapides Parish, Louisiana, Louisiana Meridian
T. 3N., R. 1E., Sec. 9, Entire section
Approximately 22.16 acres.

U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi

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REASONABLY FORESEEABLE DEVELOPMENT SCENARIO

Case File Number: EOI 1714

Project Number:

Acres: 91.56 acres

Location: Louisiana Meridian, Caddo Parish, LA, T20N-R16W, Sec. 32, Lots 1 and 3

I. Reasonably Foreseeable Development

A. RFD Baseline Scenario Assumptions and Discussion

Objective horizon is Bossier/Haynesville shale thru Lower Smackover Brown Dense. Commodities are natural gas (Bossier/Haynesville) and crude oil (Lower Smackover)

Federal acreage will be incorporated into a state determined drilling unit. Drilling and production units are variable between 640 and 1280 acres. Project multiple wells to be horizontally drilled from 1 drilling pad.

A 30' wide well access road will be constructed consisting of a 16' wide travel surface with a 7' buffer on each side.

Oil and gas occurrence potential is high. Oil and gas development potential is high.

If productive, oil and gas handling and production facilities will be constructed on the existing pad.

If productive, the reserve pit and part of the drill pad will be reclaimed when drilling and completion activities are concluded.

All disturbed acreage will be reclaimed if the well is non-productive.

B. Surface Disturbance Due to Oil and Gas Activity

Access Road: 1.03 acres (1500'X30')

Well Pad & Pit: 5.74 acres (500'X500')

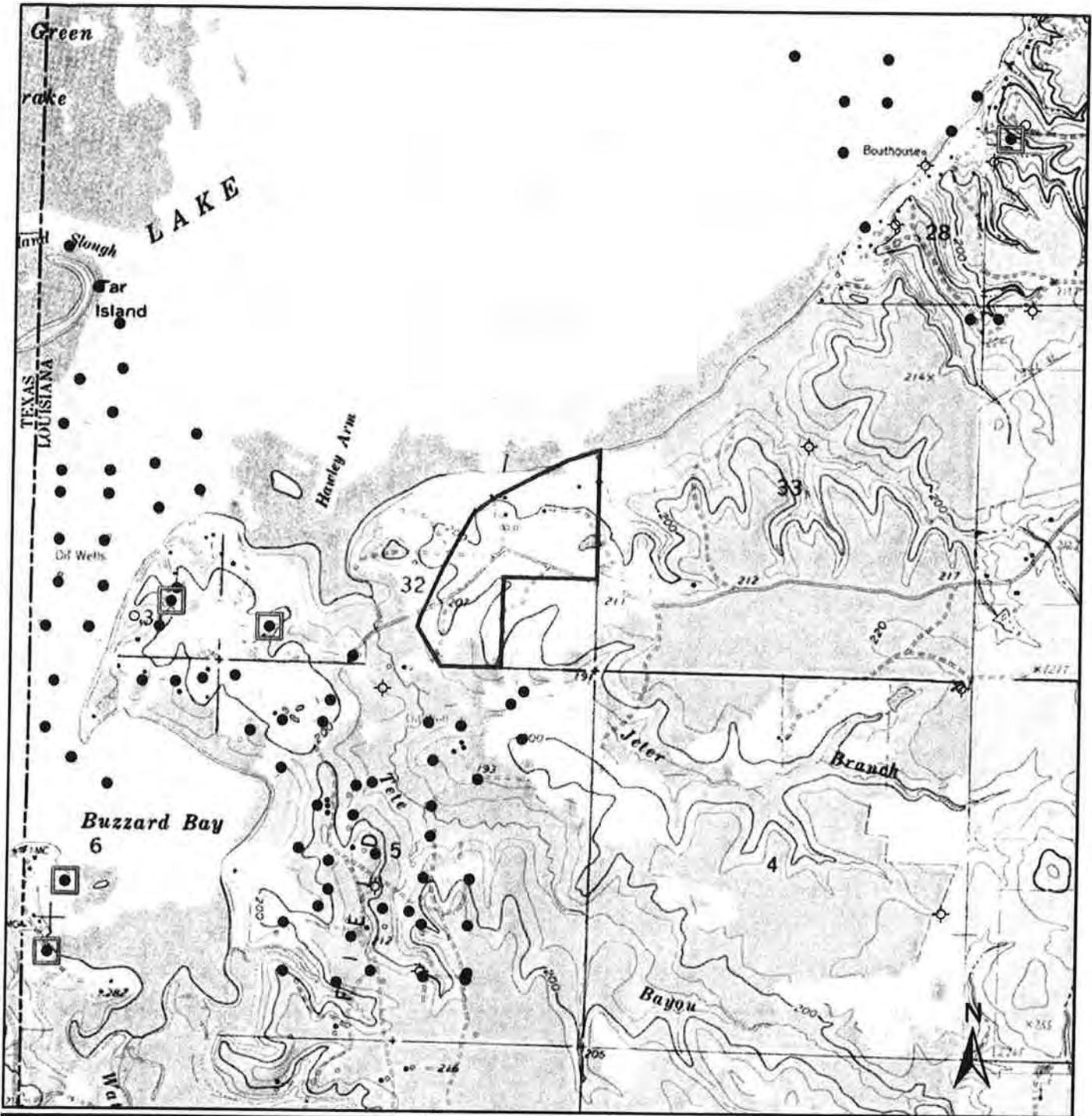
Utility and/or Pipeline R.O.W: 0 – Use access road ROW

Initial Disturbance: 6.77 acres

Partial Reclamation of Drill Site: 0.34 acres (100'X150')

Net Disturbance for Productive Wells: 6.43 acres

Proposed Federal Oil and Gas Lease
EOI 1714



Proposed Lease Area

Oil and Gas Wells

- ◊ Dry Hole, Temporarily Abandoned
- Oil Well
- _{sv} Inj. Srv. CO₂ Storage, WDW, Pseudo Orig, Mining Borhole
- Inactive Wells



Proposed Lease Area:
Caddo Parish, Louisiana, Louisiana Meridian
T. 20N., R. 16W., Sec.32, Lots 1 and 3
Approximately 91.56 acres.

**U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi**

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REASONABLY FORESEEABLE DEVELOPMENT SCENARIO

Case File Number: EOI 1715

Project Number:

Acres: 9.12 acres

Location: Louisiana Meridian, Caddo Parish, LA, T20N-R16W, Sec. 36, Lot 1

I. Reasonably Foreseeable Development

A. RFD Baseline Scenario Assumptions and Discussion

Objective horizon is Bossier/Haynesville shale thru Lower Smackover Brown Dense. Commodities are natural gas (Bossier/Haynesville) and crude oil (Lower Smackover)

Federal acreage will be incorporated into a state determined drilling unit. Drilling and production units are variable between 640 and 1280 acres. Project multiple wells to be horizontally drilled from 1 drilling pad.

A 30' wide well access road will be constructed consisting of a 16' wide travel surface with a 7' buffer on each side.

Oil and gas occurrence potential is high. Oil and gas development potential is high.

If productive, oil and gas handling and production facilities will be constructed on the existing pad.

If productive, the reserve pit and part of the drill pad will be reclaimed when drilling and completion activities are concluded.

All disturbed acreage will be reclaimed if the well is non-productive.

B. Surface Disturbance Due to Oil and Gas Activity

Access Road: 0.83 acres (1200'X30')

Well Pad & Pit: 5.74 acres (500'X500')

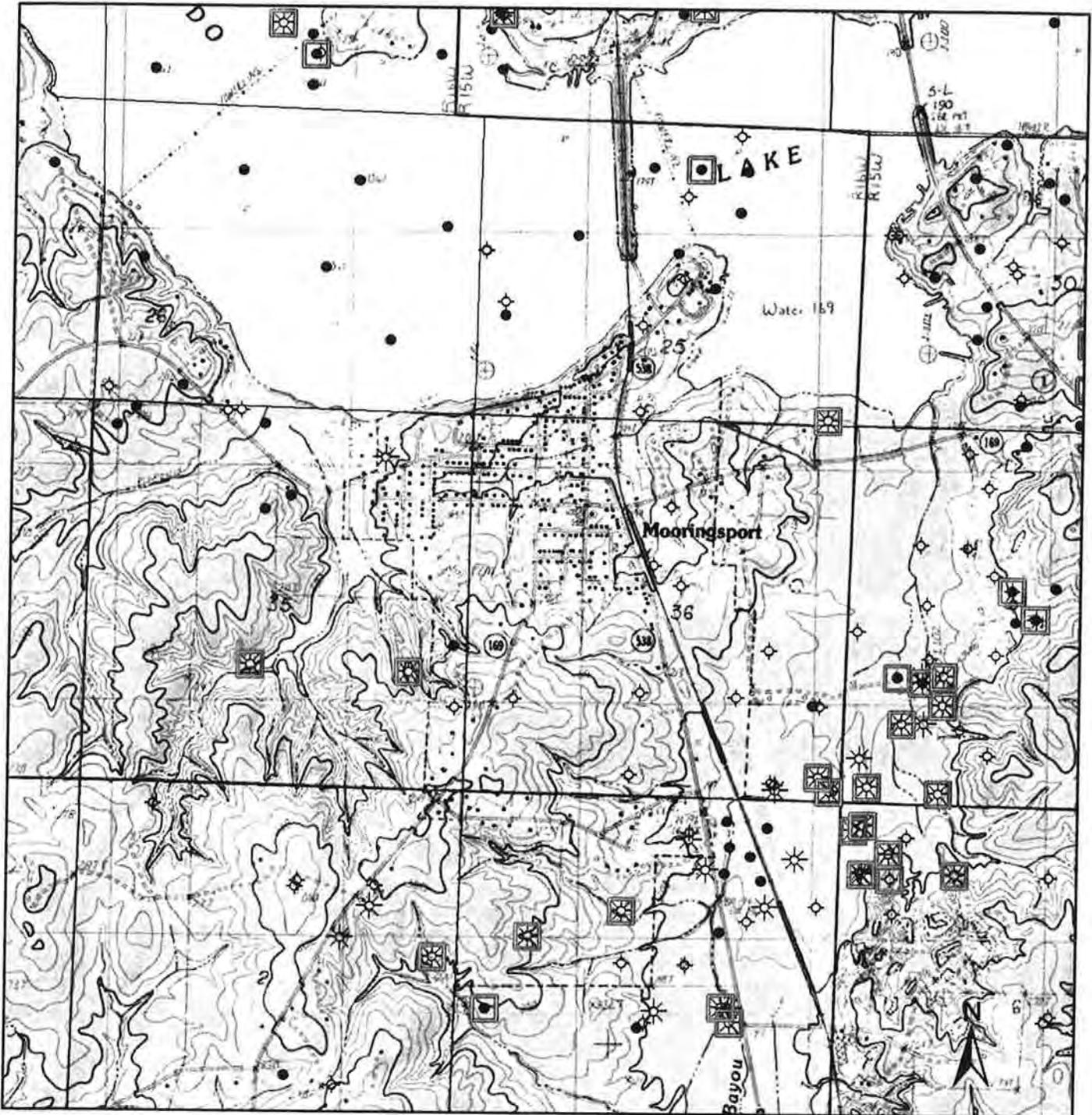
Utility and/or Pipeline R.O.W: 0 – Use access road ROW

Initial Disturbance: 6.57 acres

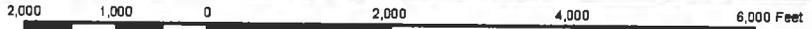
Partial Reclamation of Drill Site: 0.34 acres (100'X150')

Net Disturbance for Productive Wells: 6.23 acres

**Proposed Federal Oil and Gas Lease
EOI 1715**



| | |
|--------------------------|---|
| | Proposed Lease Area |
| Oil and Gas Wells | |
| | Dry Hole, Temporarily Abandoned |
| | Oil Well |
| | Gas Well |
| | Inj, Srv, CO2, Storage, WDW, Pseudo Orig, Mining Borehole |
| | Inactive Wells |



Proposed Lease Area:
Caddo Parish, Louisiana, Louisiana Meridian
T. 20N., R. 16W., Sec. 36 Lots 1
Approximately 9.12 acres.

**U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi**

This map contains portions of the following USGS 1:24,000 Topographic Quadrangle: Mooringsport
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

REASONABLY FORESEEABLE DEVELOPMENT SCENARIO

Case File Number: EOI 1716

Project Number:

Acres: 28.08 acres

Location: Louisiana Meridian, Caddo Parish, LA, T19N-R16W, Sec. 6, Lot 1 and fractional NENE

I. Reasonably Foreseeable Development

A. RFD Baseline Scenario Assumptions and Discussion

Objective horizon is Bossier/Haynesville shale thru Lower Smackover Brown Dense. Commodities are natural gas (Bossier/Haynesville) and crude oil (Lower Smackover)

Federal acreage will be incorporated into a state determined drilling unit. Drilling and production units are variable between 640 and 1280 acres. Project multiple wells to be horizontally drilled from 1 drilling pad.

A 30' wide well access road will be constructed consisting of a 16' wide travel surface with a 7' buffer on each side.

Oil and gas occurrence potential is high. Oil and gas development potential is high.

If productive, oil and gas handling and production facilities will be constructed on the existing pad.

If productive, the reserve pit and part of the drill pad will be reclaimed when drilling and completion activities are concluded.

All disturbed acreage will be reclaimed if the well is non-productive.

B. Surface Disturbance Due to Oil and Gas Activity

Access Road: 0.34 acres (500'X30')

Well Pad & Pit: 5.74 acres (500'X500')

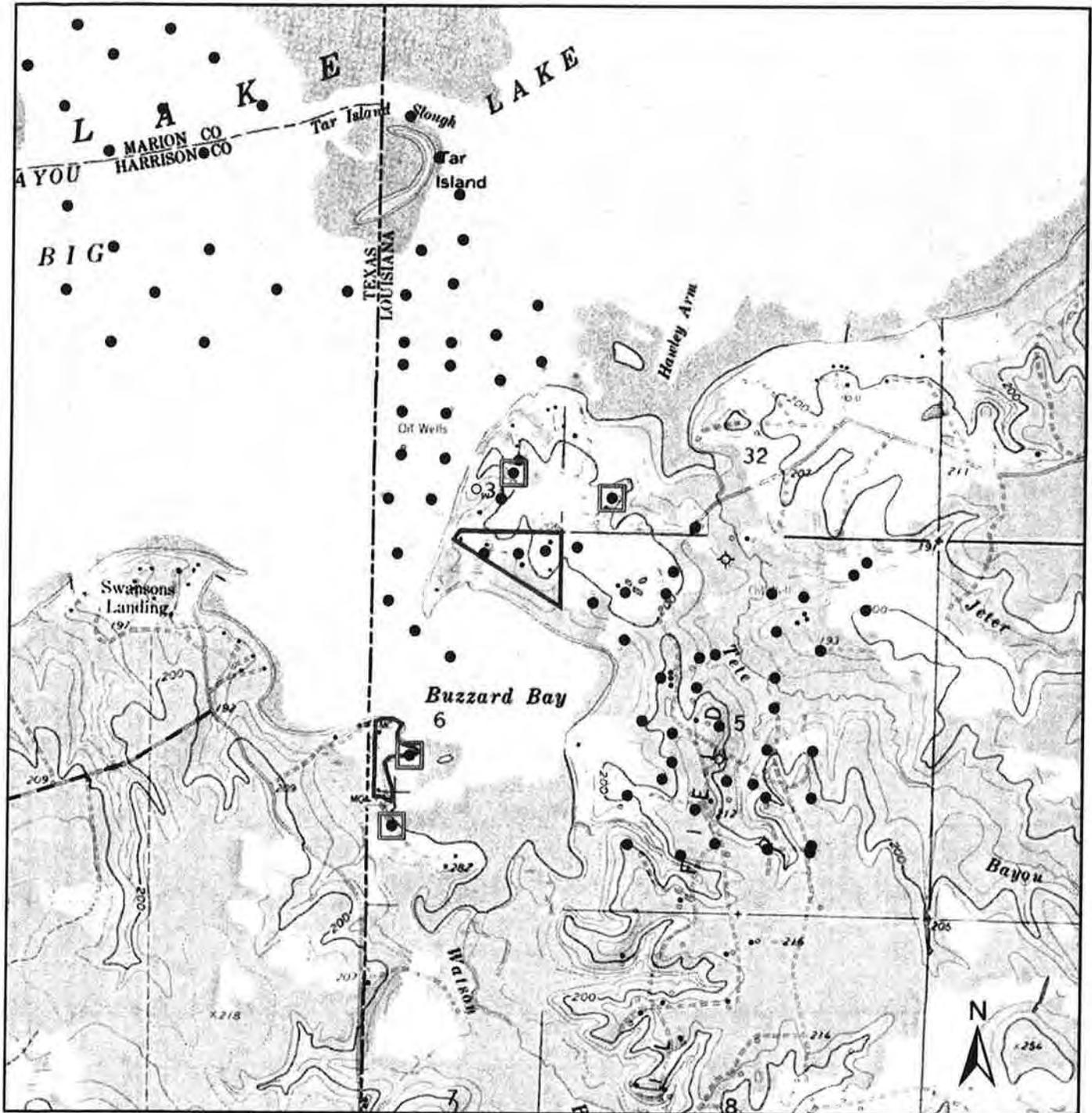
Utility and/or Pipeline R.O.W: 0 – Use access road ROW

Initial Disturbance: 6.08 acres

Partial Reclamation of Drill Site: 0.34 acres (100'X150')

Net Disturbance for Productive Wells: 5.74 acres

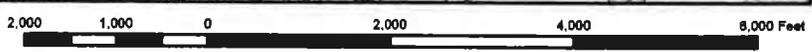
Proposed Federal Oil and Gas Lease
EOI 1716



Proposed Lease Area

Oil and Gas Wells

- ◊ Dry Hole, Temporarily Abandoned
- Oil Well
- _{sv} [f] Srv, CO₂ Storage, WDW, Pseudo Orig, Mining Borhole
- Inactive Wells



Proposed Lease Area:
Caddo Parish, Louisiana, Louisiana Meridian
T. 19N., R. 16W., Sec.6, Lots 1 and Fractional
NE Quarter
Approximately 28.08 acres.

**U.S. Department of the Interior
Bureau of Land Management
Eastern States
Southeastern States Field Office
Jackson, Mississippi**

This map contains portions of the following USGS 1:24,000 Topographic Quadrangle: Potters Point

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

APPENDIX E

Public Notice

The Bureau of Land Management, Southeastern States Field Office will prepare an environmental assessment document to consider leasing federally owned mineral estate for oil and gas exploration and development.

The locations of the tracts are as follows:

T12N, R7W, Sec. 19, Lot 8, Sec. 20, SWNW, Sec. 30, Lots 5 - 14, Sec. 31, Lots 1 - 16, Sec. 32, Lots 5 - 12, Natchitoches and Red River Parishes, (1321.29 acres) (EOI #716), T15N, R11W, Sec. 2, NWNE, Lots 6 and 8, Bossier Parish, (79.48 acres) (EOI #817), T11N, R11W, Sec. 2, Lots 2, 4, and 6, DeSoto Parish, (54.02 acres) (EOI #823), T15N, R10W, Sec. 30, Lot 5 and Sec. 32, Lot 10 DeSoto Parish, (4.4 acres) (EOI #901), T14S, R18E, Sec. 19, S2SW, Lafourche Parish, (75.48 acres) (EOI #1493), T15N, R11W, Sec. 12, Fractional part of Lots 11 and 17, Bossier Parish, (7.24 acres) (EOI #1549), T5N, R4W, Sec. 4, SWNW, Rapides Parish, (38.02 acres) (EOI #1581), T20N, R14W, Sec. 8, SESW, Caddo Parish, (39.88 acres) (EOI #1672), T3N, R1E, Section 9, Rapides Parish, (22.16 acres) (EOI #1711), T20N, R16W, Sec. 32, Lots 1 & 3, Caddo Parish (91.56 acres) (EOI #1714), T20N, R16W, Sec. 36, Lot 1, Caddo Parish, (9.12 acres) (EOI #1715), and T19N, R16W, Sec. 6, Lot 1 and Fractional NE Quarter, Caddo Parish (28.08 acres) (EOI #1716). All parcels are located in Louisiana Meridian, Louisiana.

The analysis will be prepared by an interdisciplinary team. An issue to be addressed by the team is to identify environmental impacts, and what restrictions may be necessary to avoid or mitigate identified impacts. The public is invited to participate by submitting comments on environmental issues with land use or by submitting other issues for consideration with the land use. Comments will be accepted through December 9, 2012. Send comments to Bureau of Land Management, Southeastern States Field Office, 411 Briarwood Drive, Suite 404, Jackson, MS 39206.

For further information contact Allison McCartney with the Southeast-

ern States Field Office at (601) 977-5407.

Bruce E. Dawson
Field Manager

The Times
November 9, 2012

The Times

PROOF OF PUBLICATION

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BUREAU OF LAND MANAGEMENT
BSFO

STATE OF LOUISIANA

PARISH OF CADDO

Before me, the undersigned authority, personally came and appeared

Connie Vinson-Carey, personally known to me

Who being duly sworn, deposes and says that she is the Assistant to the Classified Advertising Manager of The Times, and that the attached Advertisement published entitled:

**The Bureau of Land Management,
Southeastern States Field Office
will prepare an environmental assessment document to
consider leasing federally owned mineral estate
for oil and gas exploration and development.**

Notice published in The Times on November 9, 2012

November 9, 2012

(Signed) Connie Vinson-Carey

Sworn to and subscribed before me this 9th day of November, 2012

Diana W. Barber



DIANA WOODARD BARBER
Notary Public
Notary ID No. 60491
Caddo Parish, Louisiana

(Notary)

