

**Amelia Island, Nassau County, FL  
Marine Geological Field Investigation for  
Offshore Geologic Model Support**

**10 May 2016**

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**APPENDIX A  
BOEM Notice of Scientific Research NA15-001**

RECEIVED

JUN 11 2015



# United States Department of the Interior

## BUREAU OF OCEAN ENERGY MANAGEMENT

Gulf of Mexico OCS Region  
1201 Elmwood Park Boulevard  
New Orleans, LA 70123-2394

JUN 09 2015

In Reply Refer To: MS GM 881A

### **CERTIFIED MAIL – RETURN RECEIPT REQUESTED**

Olsen Associates, Inc.  
Attention: Dr. Albert E. Browder  
2618 Herschel St.  
Jacksonville, FL 32204

Dear Dr. Browder:

Your Notice of Scientific Research (NSR), notifying the Bureau of Ocean Energy Management (BOEM) of your plan to conduct geological (G&G) operations in the areas specified on the maps accompanying this Notice, was received on May 18, 2015. Athena Technologies, Inc. will conduct Vibracore operations for Olsen Associates, Inc. using the *R/V Artemis*.

Your NSR has been designated Notice NA15-001. Be aware of the requirements and your obligations as outlined in your application and 30 CFR Part 551. **Before starting acquisition, you are required to notify BOEM of your survey start date. You must also notify BOEM immediately upon completion of data acquisition.**

Please note that the proposed activities for Notice NA15-001 are in an area that has a potentially high-probability for both historic and prehistoric archaeological sites. If the coring operations identify any possible artifacts of human activity (e.g., fragments of wood, iron, glass, ceramics, stone tools, carbonized organic material, etc.), please notify the BOEM archaeology staff ([douglas.jones@boem.gov](mailto:douglas.jones@boem.gov) / 504-736-2859) upon discovery. BOEM requests that the location information for these sites not be made public. These areas may be historically significant archaeological sites, as well as potential grave sites, and are therefore vulnerable to illegal salvage activity if their locations are disclosed.

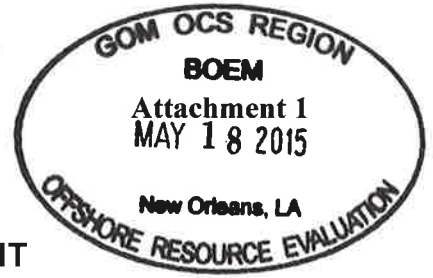
If you have any questions, please call Chad Vaughan at (504) 736-2900 ([chad.vaughan@boem.gov](mailto:chad.vaughan@boem.gov)) or the Office of Resource Evaluation, Data Acquisition and Special Projects Unit at (504) 736-2588 ([GGPermitsGOMR@boem.gov](mailto:GGPermitsGOMR@boem.gov)).

Sincerely,

Matthew G. Wilson  
Regional Supervisor  
Gulf of Mexico Region  
Office of Resource Evaluation

See Original For Attachments

Copy 1



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF OCEAN ENERGY MANAGEMENT  
Gulf of Mexico

(Insert Appropriate Regional Office)

APPLICATION FOR PERMIT TO CONDUCT GEOLOGICAL OR GEOPHYSICAL  
PROSPECTING FOR MINERAL RESOURCES OR SCIENTIFIC RESEARCH  
ON THE OUTER CONTINENTAL SHELF RELATED TO  
MINERALS OTHER THAN OIL, GAS, AND SULPHUR

(Section 11, Outer Continental Shelf Lands Act of August 7, 1953, as amended on September 18, 1978, by Public Law 95-372, 92 Statute 629, 43 U.S.C. 1340; and 30 CFR Part 251)

Albert E. Browder, Ph.D., P.E. - Olsen Associates, Inc.

Name of Applicant

2618 Herschel Street

Number and Street

Jacksonville, Florida 32204

City, State, and Zip Code

Application is made for the following activity: (check one)

Geological prospecting for mineral resources

Geological scientific research

Geophysical prospecting for mineral resources

Geophysical scientific research

Submit: Original plus three copies, totaling four copies, which include one digital copy, and one public information copy.

To be completed by BOEM

Permit Number: NA15-001

Date: 20-May-2015

### A. General Information

1. The activity will be conducted by:

Athena Technologies, Inc.  
 Service Company Name  
1293 Graham Farm Rd.  
 Number and Street  
McClellanville, SC 29458  
 City, State, and Zip Code  
 (843) 887-3800 / www.athenatechnologies.com  
 Telephone/FAX Numbers  
neil\_wicker@athenatechnologies.com  
 E-Mail Address

For Olsen Associates, Inc.  
 Purchaser(s) of the Data  
2618 Herschel St.  
 Number and Street  
Jacksonville, Florida 32204  
 City, State, and Zip Code  
(904) 387-6114  
 Telephone/FAX Numbers  
abrowder@olsen-associates.com  
 E-Mail Address

2. The purpose of the activity is:  Mineral prospecting  
 Scientific research

3. Describe your proposed survey activities (i.e., vessel use, benthic impacts, acoustic sources, etc) and describe the environmental effects of the proposed activity, including potential adverse effects on marine life. Describe what steps are planned to minimize these adverse effects (mitigation measures). For example: 1) Potential Effect: Excessive sound level Mitigation: Soft Start, MMOs, mammal exclusion zone or 2) Potential Effect: Bottom disturbance: Mitigation: ROV deployment/retrieval of bottom nodes (use continuation sheets as necessary or provide a separate attachment):

See attached Scope of Work

4. The expected commencement date is: June 2015  
 The expected completion date is: January 2016
5. The name of the individual(s) in charge of the field operation is: Neil Wicker/ Capt. Palmer McClellan  
 May be contacted at: Athena Technologies, Inc.  
 Telephone (Local) (843) 887-3800 (Marine) \_\_\_\_\_  
 Email Address: neil\_wicker@athenatechnologies.com Radio call sign \_\_\_\_\_
6. The vessel(s) to be used in the operation is (are):

Name (s)	Registry Number(s)	Registered owners)
Ship 1 <u>R/V Artemis</u>	<u>#</u>	Name 1 <u>Athena Technologies, Inc.</u>
Ship 2 _____	<u>#</u>	Name 2 _____
Ship 3 _____	<u>#</u>	Name 3 _____

7. The port from which the vessel(s) will operate is: Mayport, FL / Fernandina, FL
8. Briefly describe the navigation system (vessel navigation only): Hypack navigation software with DGPS, real time RTK vertical positioning

**B. Complete for Geological Prospecting for Mineral Resources or Geological Scientific Research**

1. The type of operation(s) to be used is: (check one)
- (a) \_\_\_\_\_ Deep stratigraphic test, or
- (b) \_\_\_\_\_ Shallow stratigraphic test with proposed total depth of \_\_\_\_\_, or
- (c)  Other Vibratory sediment core of length 6-7m, 3 in diameter
2. Attach a page-size plat showing: 1) The generalized proposed location for each test. Where appropriate, a polygon enclosing the test sites may be used and 2) BOEM protraction areas; coastline; point of reference
3. Distance and direction from a point of reference to area of activity Three to nine miles offshore of Amelia Island, FL. From 3 to 18 miles SE of St. Mary's River Entrance

**C. Complete for Geophysical Prospecting for Mineral Resources or Geophysical Scientific Research**

1. The type(s) of operation(s) to be used is (are):
- a) Acquisition method (OBN, OBC, Streamer): \_\_\_\_\_
- b) Type of acquisition: (High Resolution Seismic, 2D Seismic, 3D Seismic, gravity, magnetic, CSEM, etc.) \_\_\_\_\_
2. Attach a page-size plat showing:
- a) The generalized proposed location of the activity with a representative polygon
- b) BOEM protraction areas; coastline; point of reference
- c) Distance and direction from a point of reference to area of activity \_\_\_\_\_
3. List all energy source types to be used in the operation(s): (Air gun, air gun array(s), sub-bottom profiler, sparker, towed dipole, side scan sonar, etc.): \_\_\_\_\_
4. Explosive charges will \_\_\_\_\_ will not  be used. If applicable, indicate the type of explosive and maximum charge size (in pounds) to be used:
- Type n/a Pounds n/a Equivalent Pounds of TNT n/a

**D. Proprietary Information Attachments**

Use the appropriate form on page 9 for a "geological" permit application or the form on page 10 for a "geophysical" permit application. You must submit a separate form BOEM-0134 to apply for each geological or geophysical prospecting permit.

**E. Certification**

I hereby certify that foregoing and attached information are true and correct.

Print Name: Albert E. Browder, Ph.D, P.E.

SIGNED  DATE 13 May 2015

TITLE Senior Engineer, Vice President

COMPANY NAME: Olsen Associates, Inc.

**TO BE COMPLETED BY BOEM**

Permit No. NA15-001 Assigned by W. Chad Vaughan Date 02-Jun-2015  
of BOEM

This application is hereby:

- a.  Accepted
- b.  Returned for reasons in the attached

The approved permit is:

- a.  Attached
- b.  Will be forwarded at a later date

SIGNED  TITLE Regional Supervisor DATE 6-8-2015

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF OCEAN ENERGY MANAGEMENT  
Gulf of Mexico

(Insert Appropriate Regional Office)

NONEXCLUSIVE USE AGREEMENT FOR SCIENTIFIC RESEARCH  
ON THE OUTER CONTINENTAL SHELF

- A. State the time and manner in which data and information resulting from the proposed activity will be made available to the public for inspection and reproduction, such time being the earliest practicable time.

Deliverables for the work are expected to be provided by January 31st, 2016. A data collection report will be produced and submitted to the BOEM Marine Minerals Program and to the Florida DEP. Report and data shall be provided in electronic format(\*.pdf, gINT, EXCEL, typical) as well as hardcopy, as appropriate. Data products, which will be publicly available through BOEM and FDEP, include the vibracore logs, coordinates, photos, grain size analyses, and tables in electronic PDF format, as well as grain size distribution data in gINT and EXCEL formats.

- B. Albert E. Browder, Ph.D., P.E. - olsen assoc., inc. (applicant) agrees that the data and information resulting from the proposed activity will not be sold or withheld for exclusive use.



(Signature of Applicant)

Albert E. Browder, Ph.D., P.E.

(Type or Print Name of Applicant)

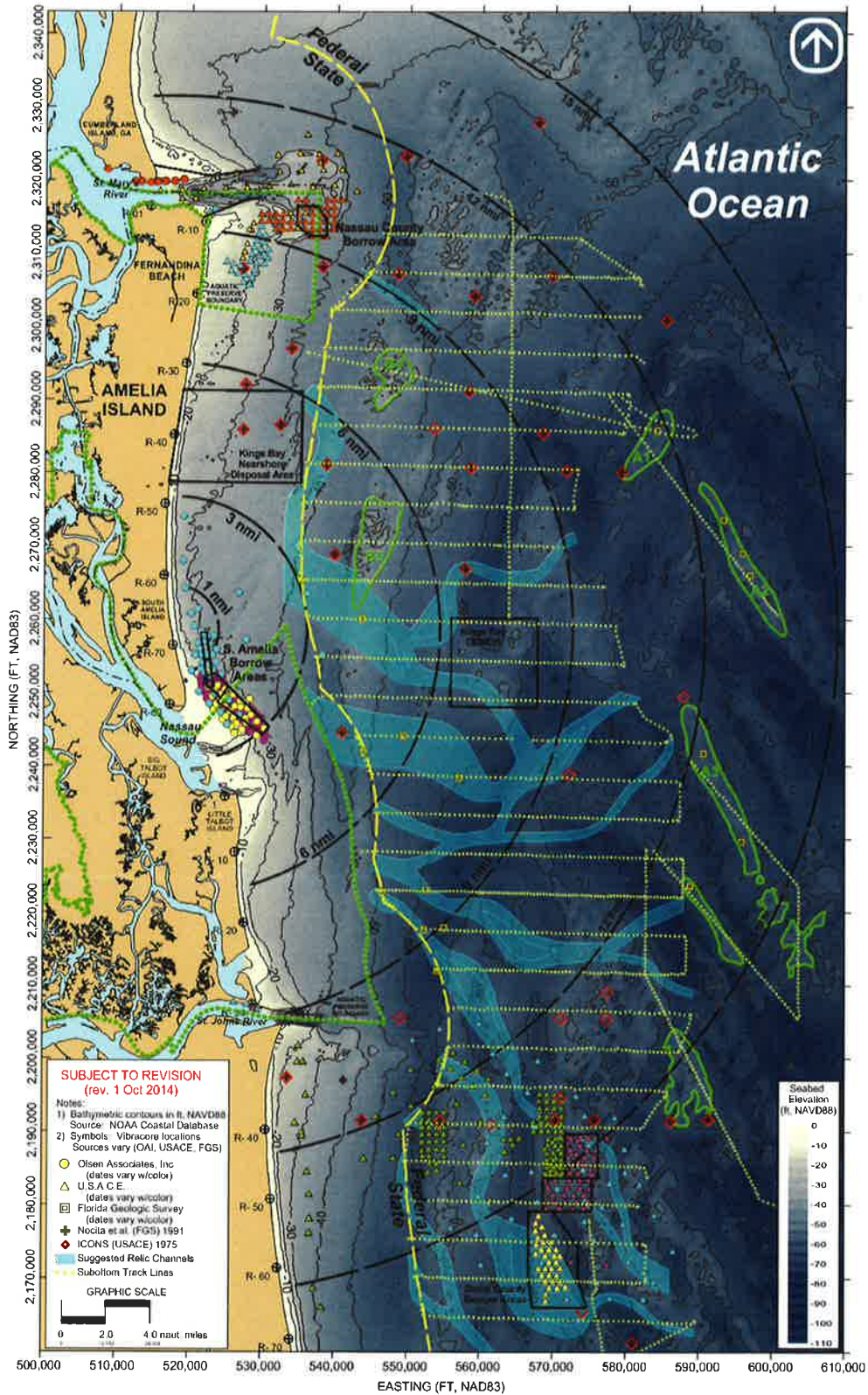
Senior Engineer, V.P. - olsen associates, inc.

(Title)



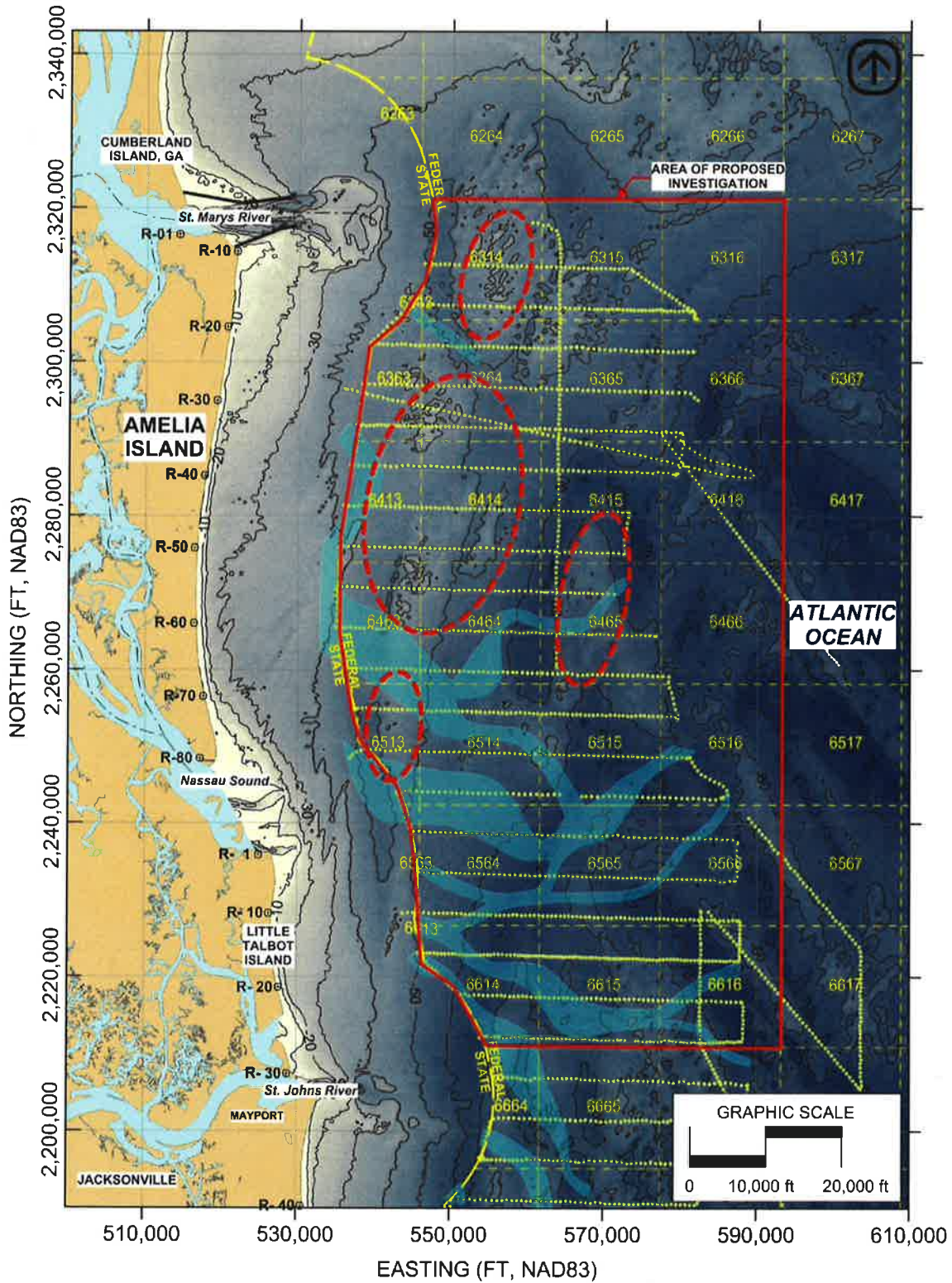
(Date)

**Submit** Original plus three copies, totaling four copies, which include one digital copy and one public information copy (all with original signatures).



**Figure 1** Compilation of available geologic data, and predicted buried channel locations from the geologic model of FGS/Phelps, in the vicinity of Amelia Island, FL. Areas in green represent “A & B” shoals identified in the ICONS study.





**Figure 2** Overlay of proposed Vibracore investigation areas (dashed ovals) and overall work area (solid-line polygon in red), Nassau County, FL. Numbers indicate BOEM OCS blocks.