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**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF OCEAN ENERGY MANAGEMENT**  
Alaska OCS Region

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(Insert Appropriate Regional Office)

**Requirements for Geological and Geophysical Explorations  
or Scientific Research on the Outer Continental Shelf**

**Application for Permit to Conduct Geological or Geophysical  
Exploration for Mineral Resources or Scientific Research on  
the Outer Continental Shelf**  
(Attachment 1)

**Nonexclusive Use Agreement for Scientific Research  
on the Outer Continental Shelf**  
(Attachment 2)

**SUBMIT:** Two originals, one digital copy, and one public copy (all with original signatures).

**Paperwork Reduction Act of 1995 (PRA) Statement:** The PRA (44 U.S.C. 3501 *et seq.*) requires us to inform you that the Bureau of Ocean Energy Management (BOEM) collects this information to evaluate applications for permits to conduct pre-lease exploration offshore and to monitor activities of scientific research conducted under notices. BOEM uses the information to ensure there is no environmental degradation, personnel harm, damage to historical or cultural sites, or interference with other uses. Responses are mandatory or to obtain or retain a benefit. Proprietary information is protected in accordance with standards established by the Federal Oil and Gas Royalty Management Act of 1982 (30 U.S.C. 1733), the Freedom of Information Act (5 U.S.C. 552(1), (4)), and Department regulations (43 CFR 2). An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid Office of Management and Budget control number. The reporting burden for this form is estimated to average 300 hours per response in the Gulf of Mexico Region and 1,000 hours per response for applications in the Pacific, Alaska, and Atlantic OCS due to NEPA requirements. Much of the work to comply with NEPA requirements has already been done in the Gulf; however, for areas outside the Gulf, BOEM is accounting for the total time expended to compile and submit the necessary information to obtain the required authorizations to acquire a BOEM permit. This includes the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Bureau of Ocean Energy Management, 45600 Woodland Road, Sterling, VA 20166.

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF OCEAN ENERGY MANAGEMENT**

**REQUIREMENTS FOR GEOLOGICAL AND GEOPHYSICAL EXPLORATIONS  
OR SCIENTIFIC RESEARCH ON THE OUTER CONTINENTAL SHELF**

**Authority**

You must perform all geological and geophysical explorations or scientific research activities authorized and conducted in the Outer Continental Shelf (OCS) according to the OCS Lands Act, 30 CFR Parts 551, 251, and other applicable Federal statutes and regulations, and amendments thereto.

**General Requirements of Permits and Notices**

You must conduct geological and geophysical activities for mineral exploration or scientific research activities authorized under 30 CFR Parts 551, 251, and in compliance with all applicable mitigation measures so that those activities do not:

- A. Interfere with or endanger operations under any lease or right-of-way or permit issued or maintained pursuant to the OCS Lands Act;
- B. Cause harm or damage to aquatic life or to the marine, coastal, or human environment;
- C. Cause pollution;
- D. Create hazardous or unsafe conditions;
- E. Unreasonably interfere with or harm other uses of the area (including submarine cables); or
- F. Disturb archaeological resources.

Any person conducting geological or geophysical activities for mineral exploration or scientific research under 30 CFR Parts 551 and 251 must immediately report to the Regional Director, BOEM:

- A. Detection of hydrocarbon occurrences;
- B. Encounters of environmental hazards that constitute an imminent threat to human activity; or
- C. Activities that adversely affect the environment, aquatic life, archaeological resources, or other uses of the area in which the exploration or scientific research activities are conducted.

Any person conducting shallow or deep stratigraphic test drilling activities under a permit for mineral exploration or scientific research under 30 CFR Parts 551 and 251 must utilize the best available and safest technologies.

The authorization that BOEM grants you under 30 CFR Parts 551 and 251 to conduct geological and geophysical explorations for minerals or for scientific research does not confer a right to any discovered oil, gas, or other minerals, or to a lease under the OCS Lands Act.

## **Time Restriction for Permits and Notices**

Permitted activities approved for a specified period, including requests for extensions, and activities under a notice may not exceed 1 year.

## **Geological and Geophysical Activities Requiring Permits and Notices**

### **Geological and Geophysical Explorations for Mineral Resources**

You may not conduct geological and geophysical explorations for mineral resources in the OCS without an approved permit unless you conduct such activities pursuant to a lease issued or maintained under the OCS Lands Act. You must obtain separate permits for either geological or geophysical explorations for mineral resources. If BOEM disapproves an application, the statement of rejection will state the reasons for the denial and will advise the applicant of those changes needed to obtain approval.

### **Geological and Geophysical Scientific Research**

You may not conduct geological and geophysical scientific research related to oil, gas, and sulphur in the OCS without an approved application for permit or filing of a notice. You must obtain separate permits for geological and geophysical scientific research that involves the use of solid or liquid explosives or the drilling of a deep stratigraphic test. If BOEM disapproves an application for permit, the statement of rejection will state the reasons for the denial and will advise the applicant of the changes needed to obtain approval.

You must file a notice with the BOEM at least 30 days before you begin scientific research not requiring a permit. We may inform you of all environmental laws and regulations pertaining to the OCS. BOEM recommends that you submit your notice 90-120 days prior to beginning your work to ensure timely review of your notice by BOEM.

## **Information Required for Permits**

Each applicant for a permit must complete the applicable sections of the Application for Permit (Attachment 1) and must include a public-information, page-size plat(s) showing the location of the proposed area of activity (Section B.2 or C.2 of Attachment 1). In addition, each applicant for a geological or geophysical permit must submit the appropriate attachment to section D of the Application. This includes a detailed map of the proposed activity for Section D.8 (Geological Application) or Section D.12 (Geophysical Application). Only applicants for a notice of scientific research must complete a Nonexclusive Use Agreement (Attachment 2).

The information provided on the Application for Permit (excluding section D) and on the Nonexclusive Use Agreement, including continuation sheets and the page-size plat(s), is considered NON-PROPRIETARY INFORMATION. These non-proprietary portions of the application constitute the "public information" copy of Form BOEM-0327 and with the executed permit will be available to the public upon request.

The information listed in Section D is considered PROPRIETARY INFORMATION and you should NOT attach it to the public information copy. BOEM will not make this information available to the public without the consent of the potential permittee or for a period mandated by law or regulation. However, BOEM may determine that earlier release is necessary for the proper development of the area permitted.

## Modifications to Approved Permits

The BOEM Regional Supervisor must approve any modification to the permitted operations.

### Filing Locations for Permits to Conduct Explorations for Mineral Resources and for Permits or Notices to Conduct Scientific Research

File two originals, one digital copy, and one public copy (all with original signatures) at the following locations at least 30 days before you begin operations. BOEM recommends that you submit your notice or application 90-120 days prior to beginning your work to ensure timely review of your notice by BOEM.

A. For the OCS off the State of Alaska:

Regional Supervisor for Resource Evaluation  
Bureau of Ocean Energy Management  
Alaska OCS Region  
3801 Centerpoint Drive  
Suite #500  
Anchorage, Alaska 99503-5823

B. For the OCS in the Gulf of Mexico and off the Atlantic Coast:

Regional Supervisor for Resource Evaluation  
Bureau of Ocean Energy Management  
Gulf of Mexico OCS Region  
1201 Elmwood Park Boulevard  
New Orleans, Louisiana 70123-2394

C. For the OCS off the States of California, Oregon, Washington, or Hawaii:

Regional Supervisor, Office of Strategic Resources  
Bureau of Ocean Energy Management  
Pacific OCS Region  
760 Paseo Camarillo  
Suite #102  
Camarillo, California 93010-6092

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF OCEAN ENERGY MANAGEMENT**

Alaska OCS Region

\_\_\_\_\_  
(Insert Appropriate Regional Office)

**APPLICATION FOR PERMIT TO CONDUCT GEOLOGICAL OR GEOPHYSICAL  
EXPLORATION FOR MINERAL RESOURCES OR SCIENTIFIC RESEARCH ON  
THE OUTER CONTINENTAL SHELF**

(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 Parts 551 and 251)

TGS-NOPEC Geophysical Company

\_\_\_\_\_  
Name of Applicant

10451 Clay Road

\_\_\_\_\_  
Number and Street

Houston, Texas, 77041

\_\_\_\_\_  
City, State, and Zip Code

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

\_\_\_\_\_ Geological exploration for mineral resources

\_\_\_\_\_ Geological scientific research

X  Geophysical exploration for mineral resources

\_\_\_\_\_ Geophysical scientific research

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

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**To be completed by BOEM**

**Permit Number:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**A. General Information**

1. The activity will be conducted by:

SAExploration Inc.

For TGS-NOPEC Geophysical Company

Service Company Name  
8240 Sandlewood Place, Suite 102

Purchaser(s) of the Data  
10451 Clay Road

Address  
Anchorage, Alaska 99518

Address  
Houston, Texas 77043

City, State, Zip  
P: 1-907-522-4499, F: 1-907-522-4498

City, State, Zip  
Phone: 403-781-1448, Fax: 403-781-1710

Telephone/FAX Numbers  
rtrupp@saexploration.com

Telephone/FAX Numbers  
Troy.Nelson@tgs.com

E-Mail Address

E-Mail Address

2. The purpose of the activity is:  X  Mineral exploration  
  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, Protected Species Observers (PSO's), 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):

Refer to attached "Plan of Operations" and "Marine Mammal Monitoring and Mitigation Plan" for details of survey activities and environmental mitigations.

4. The expected commencement date is:  July 15, 2019

The expected completion date is:  October 31, 2019

5. The name of the individual(s) in charge of the field operation is:

Ted Smith - SAExploration Inc.

May be contacted at:

1-907-522-4499

Telephone (Local)  1-907-301-5453 (cell)  (Marine)  TBD

Email Address:  tsmith@saexploration.com

6. The vessel(s) to be used in the operation is (are):

Vessel Name (s)	Registry Number(s)	Radio Call Sign(s)	Registered Owner(s)
Refer to Plan of Operations	_____	_____	_____
Section 3,4 for details	_____	_____	_____
_____	_____	_____	_____

7. The port from which the vessel(s) will operate is: West Dock or Oliktok Dock

8. Briefly describe the navigation system (vessel navigation only):

DGPS units receiving precise point positioning differential corrections.

Primary/secondary systems typically C-Nav units receiving Net-1& 2 corrections.

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

1. The type of operation(s) to be employed is: (check one)

- a. N/A Deep stratigraphic test, or
- b. N/A Shallow stratigraphic test with proposed total depth of \_\_\_\_\_, or
- c. N/A Other \_\_\_\_\_

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, 2) BOEM protraction areas; coastline; point of reference; 3) Distance and direction from a point of reference to area of Activity; 4) Label as "**Public Information.**"

N/A

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

1. The proposed operation: Cable-free OBN geophysical exploration

- a. Acquisition method (OBN, OBC, Streamer): Ocean Bottom Node
- b. Type of acquisition: (High Resolution Seismic, 2D Seismic, 3D Seismic, gravity, magnetic, CSEM, etc.)  
3D Seismic

Refer to "Plan of Operations" for more details on acquisition methods

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, and
- d. Label as "**Public Information.**"

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.).

680 in3 compressed air seismic source array; 1,240 in3 compressed air seismic source array. Refer to "Plan of Operations" for more details.

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 \_\_\_\_\_ Pounds \_\_\_\_\_ Equivalent Pounds of TNT \_\_\_\_\_

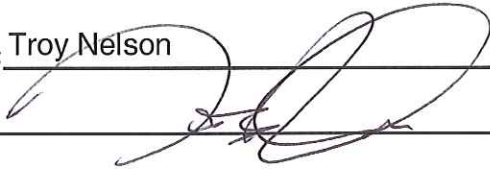
**D. Proprietary Information Attachments**

Use the appropriate form on page 9 for a "geological" permit application or the form on page 11 for a "geophysical" permit application. You must submit a separate Form BOEM-0327 to apply for each geological or geophysical permit.

**E. Certification**

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

Print Name: Troy Nelson

SIGNED  DATE December 3, 2019

TITLE Senior Regulatory and Compliance Specialist

COMPANY NAME: TGS-NOPEC Geophysical Company

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**TO BE COMPLETED BY BOEM**

Permit No. \_\_\_\_\_ Assigned by \_\_\_\_\_ of BOEM Date \_\_\_\_\_

This application is hereby:

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

SIGNED \_\_\_\_\_ TITLE Regional Supervisor DATE \_\_\_\_\_