THE STATE of ALASKA
GOVERNOR SEAN PARNELL

Department of Natural Resources

DIVISION of Oil & Gas
Anchorage Office

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Anchorage, Alaska 99501-3560
Main: 907.269.8800
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January 13, 2014

Ms. Suzan Simonds
SAE Alaska
8240 Sandlewood Pl., Suite #102
Anchorage, AK 99507

RE: **MLUPNS 13-010** Geophysical Exploration Permit
Nigliq-Fiord and Big Bend 3D Seismic Survey

Dear Ms. Simonds:

The Division of Oil and Gas (Division) approves the SAE Alaska Nigliq-Fiord and Big Bend 3D Seismic Survey permit application, dated October 28, 2013 and revised December 11, 2013, to conduct geophysical exploration on State of Alaska lands in the North Slope Borough. The enclosed permit, MLUPNS 13-010, authorizes SAE Alaska to conduct a seismic survey as per the conditions of the permit.

This permit is effective January 13, 2014 to May 31, 2014 or until tundra closes.

Scope of Review
Issuance of a permit under 11 AAC 96 is not a disposal of an interest in land and does not grant a preference right to a lease or other disposal. The permit is revocable for cause for violation of a permit stipulation of this chapter, and is revocable at will if the department determines that the revocation is in the state's interest. Each permit issued is subject to any stipulations the department determines necessary to assure compliance with this chapter, to minimize conflicts with other uses, to minimize environmental impacts, or otherwise to be in the interests of the state. Public notice of any miscellaneous land use application is discretionary under 11 AAC 96.030(c). The Director of the Division has the right at any time to amend or modify any provisions of this permit, or revoke this permit.

Project Location
The proposed 3D program is located on state lands within the North Slope Borough. SAE Alaska plans to acquire approximately 650 square miles of data within the following locations:

Nigliq-Fiord 3D - Umiat Meridian, Township 12-14N, Range 3-7E.
Big Bend 3D - Umiat Meridian, Township 7-9N, Range 2-6E.

Project Description
SAE Alaska plans to acquire a 3D seismic program on the North Slope this winter during the period of January 1, 2014 to May 31, 2014. The proposed onshore/offshore program will be named Nigliq-Fiord 3D and the proposed onshore program will be named Big Bend 3D. The program areas are defined by the boundary boxes displayed on the Location Map west of Deadhorse. SAE Alaska will be mobilizing their camp and equipment from existing facilities in Deadhorse via the infield road infrastructure and/or ice roads to staging areas near the program areas for offloading.

Seismic operations will be conducted utilizing 12 (rubber tracked/buggy) vibrators that operate in groups of up to 3 or 4. Generally receiver (i.e., geophone) lines run perpendicular to source lines and will be typically spaced a minimum of 660 feet apart. Geophones are typically located every 110 feet along this line. Wireless nodes and geophones will be laid out by crews on foot and by use of rubber tracked vehicles. There may be up to 24 receiver lines placed on the ground at a time with vibrators typically operating on two lines at a time. During offshore operations on ice, it is possible that the source lines will be groomed ahead of the crew to insure a smooth surface. Vibrators will only shake on grounded ice up to 3 meters thick.

The energy source is a Vibroseis with a frequency of approximately 4 to 100 Hz; the anticipated duration is 4-8 seconds for each sweep. The duration and decibel level of the source varies depending on such factors as terrain and weather conditions.

Agency Review
The Division provided notice to other regulatory agencies on November 18, 2013, with the opportunity to comment until November 26, 2013. The Division received no agency comments. DMLW NRO was consulted in the attached Geophysical Permit Conditions and SAE Alaska will send both DMLW NRO and DOG the completion report which will include all surface damages and corrective actions.

Public Review
The Division posted a public notice on November 28, 2013 and provided the public with an opportunity to comment by 4:30 pm, December 30, 2013. The notice was posted on the State of Alaska online public notice website and the Division's website; and published in the Anchorage Daily News and the Arctic Sounder on November 28, 2013. The notice was faxed to post offices in Barrow, Nuiqsut, and Prudhoe Bay/Deadhorse for posting. The notice was also mailed to City of Barrow, City of Nuiqsut, Department of Transportation and Public Facilities (DOTPF), Kuukpik Corporation and Alyeska Pipeline Service Company. The Division received no public comments.

Performance Guarantee
The permittee has adopted into their application individual landowner outreach and is liable for any and all damages. The permittee has provided the Division with a performance guarantee under 11 AAC 96.060 in the amount of $100,000. If the permittee does not make an agreement with the surface owner for reasonable access to explore the estate reserved under AS 38.05.125,

an opportunity to be heard by the Division and request for a damages bond shall be provided by AS 38.05.130.

Application Approved
Should any unforeseen issues arise, the Division has authority to revoke and amend this permit. As detailed in this authorization, the Division shall be notified if, during the conduct of operations, a surface use conflict occurs. All operations conducted under this permit are subject to inspection by the Division, and if damage occurs, appropriate interest holders will be engaged, and corrective action will be prescribed. The Division will impose additional provisions as necessary as set out in 11 AAC 96.040 at any time during the activity approved under this authorization to minimize impacts and conflicts.

The Division considered all facts material to this application including the permit provisions contained in this authorization per 11 AAC 96.040(b). The Division has determined that this permit and attached provisions for this non-permanent activity as conditioned is in the state's interest. Provisions in this authorization were necessary to protect the state's interest and the public interest.

An eligible person affected by this decision may appeal it, in accordance with 11 AAC 02. Any appeal must be received within 20 calendar days after the date of issuance of this decision, as defined in 11 AAC 02.040(c) and (d), and may be mailed or delivered to Joe Balash, Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to 1-907-269-8918; or sent by electronic mail to dnr.appeals@alaska.gov. This decision takes effect immediately. If no appeal is filed by the appeal deadline, this decision becomes a final administrative order and decision of the department on the 31st day after issuance. An eligible person must first appeal this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.

Sincerely,

Kim Kruse
Permitting Manager

Attachments:
Location Map
Geophysical Permit Conditions

E-Distribution:
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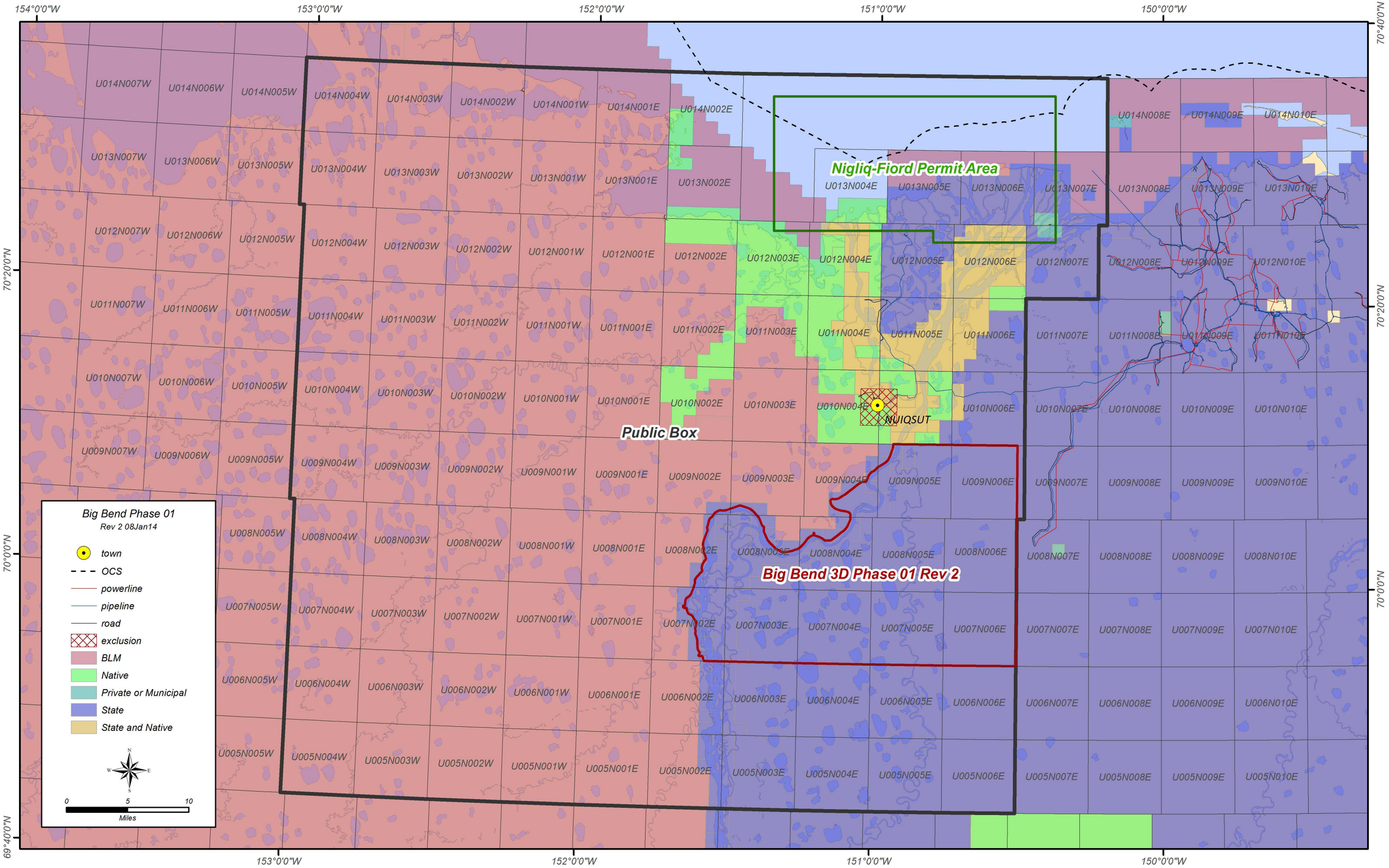
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Nigliq-Fiord Permit Area
Public Box
NUIQSUT
Big Bend 3D Phase 01 Rev 2
Big Bend Phase 01
Rev 2 08Jan14
town
OCS
powerline
pipeline
road
exclusion
BLM
Native
Private or Municipal
State
State and Native
0
5
10
Miles

GEOPHYSICAL PERMIT CONDITIONS

ATTACHMENT 1

Date Issued:	1/13/2014
MLUP:	13-010
Project Name:	Nigliq-Fiord and Big Bend 3D
Type:	Geophysical Exploration
Permittee:	SAE Alaska

Geophysical and Seismic activities are subject to the following permit conditions:

1. The permittee shall defend, indemnify and hold the State of Alaska harmless from and against any and all claims, damages, suits, losses, liabilities and expenses for injury to or death of persons and damage to or loss of property arising out of or in connection with the entry on and use of State lands authorized under this approval by the permittee, its contractors, subcontractors and their employees.

2. The permittee shall notify and obtain approval from the Division of Oil and Gas (Division) in advance of any activities which significantly deviate from the approved plan. Any action taken by the permittee or his agent which increases the overall scope of the project or which negates, alters, or minimizes the implied intent of any stipulation contained in this permit will be considered a significant deviation from the approved plan.

3. The permittee and its contractors shall not begin any seismic operations until receiving all necessary local, state and federal permits and approvals plus receiving letters of non-objection from private property owners or leaseholders.

4. The permittee shall inform and ensure compliance with all conditions of this approval by its employees, agents and contractors, including subcontractors at any level.

5. Approval of this permit does not constitute the specific approval required for surface entry without an agreement with the surface owner. Before entering on privately owned surface land in exercise of the state's mineral rights, the permittee must comply with AS 38.05.130.

6. The seismic exploration activities granted under this permit must not diminish the use and enjoyment of lands encompassed within a Native Allotment. Before entering a pending or approved Native Allotment, the permittee shall contact the Bureau of Indian Affairs and Bureau of Land Management and comply with applicable federal law.

7. The Commissioner of the Department of Natural Resources (DNR) may require that an authorized state representative be present during any oil and gas activities described in or conducted under this approval.

8. The Alaska Historic Preservation Act (AS 41.35.200) prohibits the appropriation, excavation, removal, injury, or destruction of any state-owned historic, prehistoric (paleontological) or archaeological site without a permit from the commissioner. All state permits require consultation with the State Historic Preservation Office (SHPO) (907-269-8722) so that consultation per section 106 of the National Historic Preservation Act may proceed. Should any sites be discovered during the course of field operations, activities that may damage the site will cease and the Office of History and Archaeology in the Division of Parks and Outdoor Recreation (907-269-8721) shall be notified immediately.

9. The permittee shall make available, to the Division, all records relating to the survey operations and landowner approvals upon request.

10. The permittee shall make available a copy of the seismic plan of operations, all subsequent amendments, and a copy of this approval and all its attachments to any interested party upon request and in a reasonable time.

11. The permittee shall apply the International Association of Geophysical Contractors Setback Guidelines to activity approved under this authorization. Alternative setback distances may be employed to protect coastal uses and resources, water wells, structures, private property including livestock, and other resources if it is determined that a particular guideline is insufficient.

12. Fuel and hazardous substances. Secondary containment shall be provided for fuel or hazardous substances, as defined under AS 46.03.826 (5) or under 42 U.S.C. 9601(14)F.

    a. Fuel or hazardous substance transfers. Secondary containment or a surface liner must be placed under all container or vehicle fuel tank inlet and outlet points, hose connections, and hose ends during fuel or hazardous substance transfers. Appropriate spill response equipment to respond to a spill of up to five gallons must be on hand during any transfer or handling of fuel or hazardous substances. Transfer operations shall be attended by trained personnel at all times.

    b. Fuel or hazardous substances container(s) with a total combined capacity larger than 55 gallons shall not be stored within 100 feet of a waterbody.

13. Stationary fuel storage facilities must not be placed within the annual floodplain of a watercourse or closer than 100 ft. to a waterbody. There shall be no fueling, servicing or repair of vehicles or equipment, and no vehicles shall be left unattended within the floodplain or below the ordinary high water (OHW) line of any river, lake or stream or closer than 100 ft. to a waterbody or wetland.

14. Vehicles shall be operated in a manner such that the vegetative mat is not disturbed, and blading or removal of vegetative cover is prohibited except as approved by DNR Division of Mining, Land and Water (DMLW) Northern Region Office (NRO). Filling of low spots and smoothing using snow and ice is allowed. Incidents of vegetative mat damage and follow-up corrective actions shall be reported to the Division.

15. Alterations of the banks of a watercourse are prohibited. Ice or snow bridges and approach ramps constructed at river, slough, or stream crossings must be substantially free of extraneous material (i.e., soil, rock, wood, or vegetation) and must be removed or breached before spring breakup. Crossing lakes and waterways shall be conducted in a manner to avoid additional freeze-down of deep-water pools that might harbor overwintering fish. Removal and compaction of snow from deep-water pools is prohibited.

16. To avoid additional freeze-down of deep-water pools harboring overwintering fish, watercourses shall be crossed at shallow riffle areas from point bar to point bar. Compaction or removal of the insulating snow cover from the deep-water pool areas of rivers must be avoided.

17. Operations must avoid occupied grizzly bear dens by one-half mile unless alternative mitigation measures to minimize disturbance are authorized by the Division after consultation with Department of Fish and Game (ADFG). Known den locations shall be obtained from the ADFG Division of Wildlife Conservation, (Fairbanks 907-459-7213; Anchorage 907-267-2179) prior to starting operations. Occupied dens encountered in the field must be reported to the above, and subsequently avoided.

18. All activities shall be conducted in a manner to minimize or avoid disturbance to wildlife and their habitat. Hazing of wildlife is prohibited unless a Health Safety and Environment concern is present.

19. Trails, campsites and work areas must be kept clean. Trash, survey lath, markers, and other debris that accumulates in camps, along seismic lines, and travel routes, that are not recovered during the initial cleanup, shall be picked up and properly disposed of prior to freeze-up the following winter.

20. All wastewater must be disposed of in a manner acceptable to DEC and drinking water must meet Alaska drinking water standards.

21. All solid wastes, including incinerator residue, shall be backhauled to a solid waste disposal site approved by DEC.

22. The Director has the right at any time to amend or modify any provisions of this permit, or revoke this permit.

23. As a condition of the issuance of this Geophysical Exploration Permit, the permittee acknowledges the requirements of 11 AAC 96.210 (1) and agrees to notify the Director of the Division and submit seismic exploration data. The Geophysical Data Submission Requirements can be found on the DNR Division's Website http://dog.dnr.alaska.gov/Permitting/permittingForms.htm. Your signature acknowledges your obligation to fulfill the Data Submittal requirements.

24. The permittee must complete and return a Geophysical Activity Completion Report form for each set of 3D data acquired. Please submit a separate form for each sub-program data submittal. A non-confidential public completion report will be placed into the permit file each time a sub-program is completed. Completion reports must be submitted to our office by July

1, 2014. For in depth instruction on how to complete the form please refer to the Division's permitting website http://dog.dnr.alaska.gov/Permitting/PermittingForms.htm.

25. A summary record of all surface impacts, lost equipment, spills, fires, and unintended explosions, shall be included in the completion report. Rehabilitation, if required, shall be completed to the satisfaction of the DNR.

26. The permittee shall be responsible for all equipment used in association with the seismic survey. Equipment lost or abandoned during operations shall be recovered and reported. If the lost equipment is not recovered, the report will include a detailed explanation of the circumstances of the loss and the recovery effort that includes Global Positioning System (GPS) location coordinates.

27. The Division's Permitting Section shall be notified in Anchorage by telephone at 907-269-8800 and by email at dog.permitting@alaska.gov if, during the conduct of operations, state resources are damaged or a conflict occurs.

28. All fires and explosions that require a response to protect life and property must be reported to DNR and Department of Environmental Conservation (DEC) immediately and shall be supplied with all follow-up incident reports.

29. The permittee shall comply with the DEC requirements for reporting the unauthorized discharge, leak, or spill of hydrocarbons or toxic or hazardous substances. The permittee shall notify DNR of all spills as required under 18 AAC 75.300. The DNR 24 hour spill report number is 907-451-2678; the fax number is 907-451-2751.

Geophysical and Seismic activities proposed by SAE Alaska for the Nigliq-Fiord and Big Bend 3D Seismic Survey are subject to the following project specific stipulations:

30. All marine operations will be conducted in accordance with any voluntary action submitted by the permittee and approved by the National Marine Fisheries Service (NMFS). The Incidental Harassment Authorization (IHA) application describes specific operational procedures, mitigation measures, observer protocols, and other measures designed to protect marine mammals from potential impacts of marine seismic operations. All operations authorized under this permit are required to meet other state and federal requirements, such as the Marine Mammal Protection Act (MMPA), Endangered Species Act (ESA), and other applicable laws protecting marine mammals.

31. Operations must avoid known polar bear dens by one mile. Known den locations shall be obtained from the U.S. Fish and Wildlife Service (907-786-3800 or 800-362-5148) prior to starting operations. New dens encountered in the field must be reported to the above, and subsequently avoided by one mile.

32. The use of ground contact vehicles for off-road travel must be limited to those areas which have adequate ground frost and snow cover to prevent damage to the ground surface. Movement of equipment through willow (Salix) stands must be avoided wherever possible. The use of ground contact vehicles for off-road travel is subject to regional tundra travel

openings and closure notices issued by DNR DMLW NRO. Operations are restricted to the winter seasonal opening. After April 15, the use of ground contact vehicles is subject to termination within 72 hours of written notification from DNR DMLW NRO.

33. There are DNR tundra monitoring stations on the north slope. The permittee should work with DNR DMLW North Slope Team on identifying and avoiding these stations.

I acknowledge, and agree to these Permit terms, conditions and stipulations.

Stephen Samuelson 1-14-14

Authorized Representative Date