



February 14, 2023

Ms. Ashley Ethridge
DNR Division of Oil and Gas
550 W. 7th Ave., Suite 800
Anchorage, AK 99501

Subject: Geophysical Exploration Permit

Dear Ms. Ethridge:

SAExploration Seismic Services, LLC (SAE) submits the following application package, plan of operations and maps as our permit request to acquire 2D seismic data on a project called Whiskey Gulch 2 D Test Line. We outlined below, techniques and milestones, which we are requesting approval to use within the Kenai Peninsula Borough on State, Borough, Private lands and Cook Inlet waters.

Seismic acquisition of the area should take approximately 2 weeks to complete, including weather delays. We propose to acquire the entire program within the period from April 1st – May 10th, 2023.

The Whiskey Gulch 2D line covers approximately 4.2 miles onshore and 1.2 miles offshore. SAE will use autonomous nodal seismic recording equipment in all three operating environments onshore, tidal and offshore. SAE will place nodes ~27.5 feet apart onshore but at 55 foot intervals in the tidal and marine environment. Tracked vehicles will be used for the deployment and retrieval of equipment and also for the movement of drill equipment.

In the onshore environment, SAE will be testing a new "Clearwave directional explosive product" that is only .058kg and will be also testing it against a 1.1kg conventional explosive source to evaluate needs for subsurface imaging in the area. SAE will drill and place both clearwave source at 55 foot intervals along this 2D line. For comparison, SAE will also place the conventional source at 330 foot intervals for sampling ~1.8 miles of the 4.2 miles onshore.

Marine operations will be a single 2D line extending offshore to layout the nodal devices. The offshore nodes will be tethered to allow for an efficient retrieval. After source acquisition onshore, the equipment will be retrieved, and data downloaded from the nodes. Approximate timing of nodes to be deployed and then retrieved will be 3-4 days.



Please find enclosed:

- Geophysical Exploration permit application
- Topo and Satellite Map showing 2D line
- Plan of Operations
- Application fee of \$500

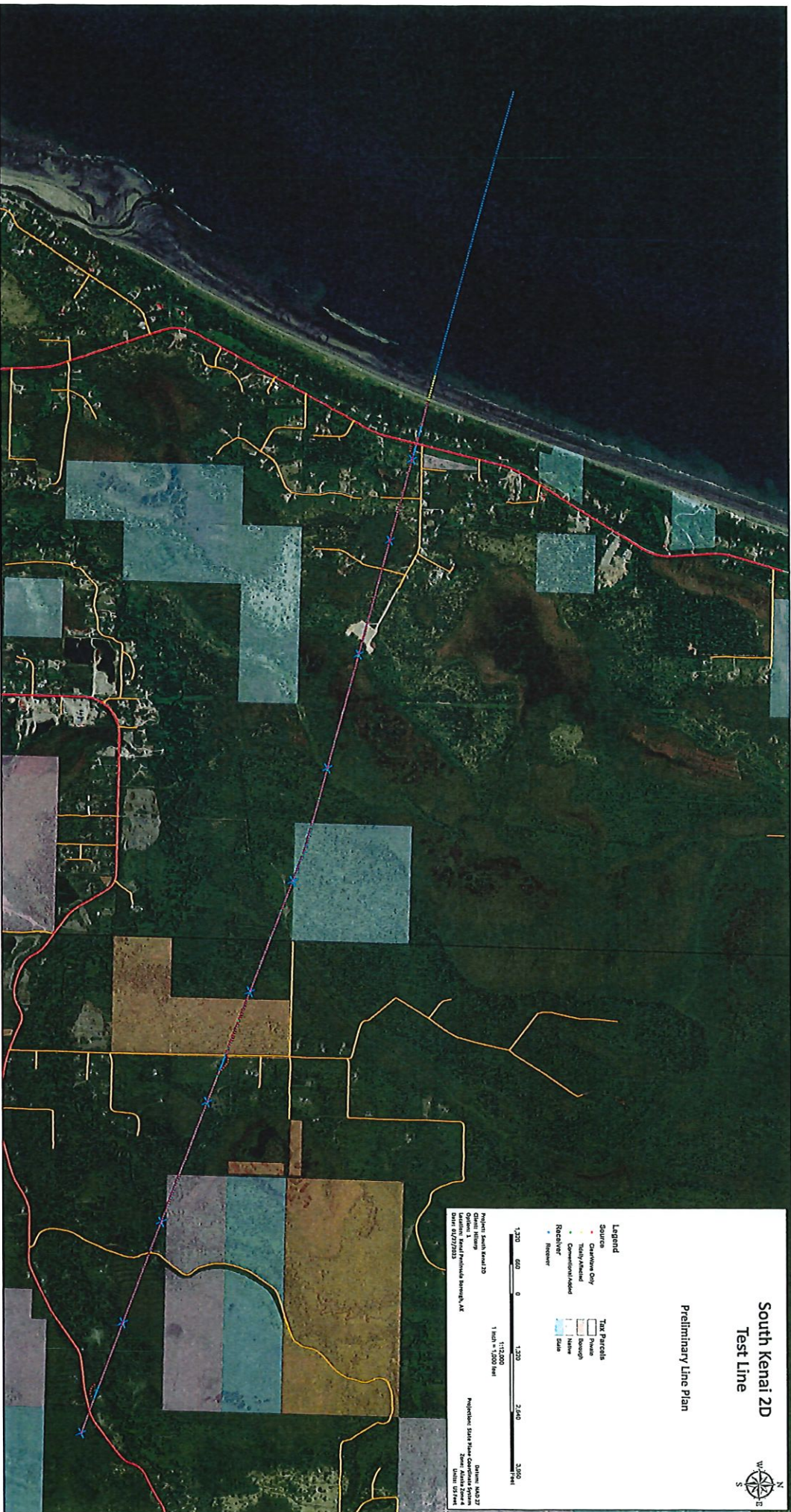
In addition, SAE is intimately familiar with the available infrastructure in the region, the local politics and climactic conditions and are well equipped to ensure their success with regard to the various permit stipulations.

Should you require any additional information we will be available upon request.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ashley', with a long, sweeping horizontal line extending to the right.

Ashley Rogers
Permits Coordinator



South Kenai 2D Test Line

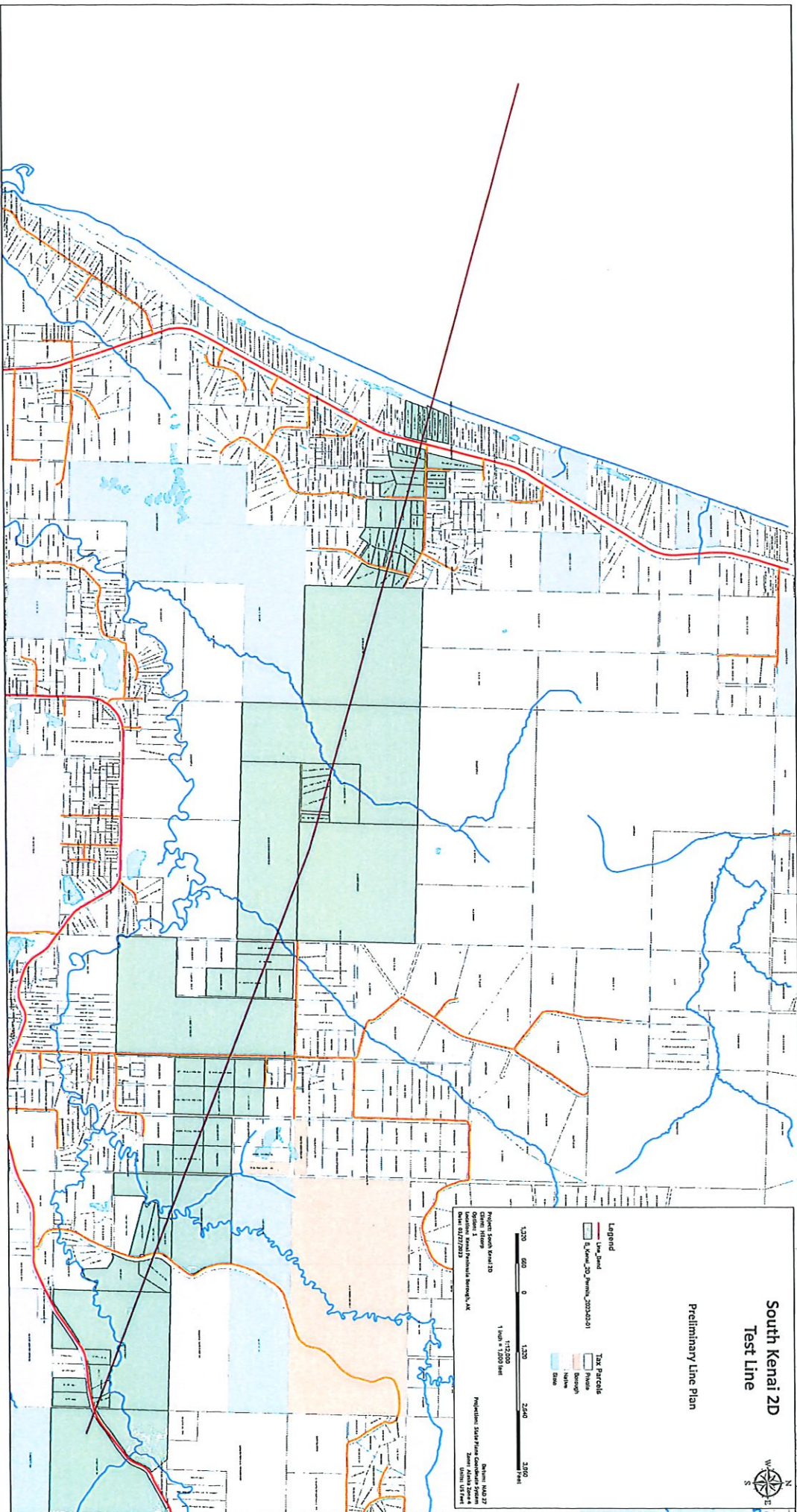


Preliminary Line Plan

- Legend**
- Source**
 - Charlevoix City
 - Tully Amund
 - Commission Added
 - Receiver**
 - Receiver
 - Trk Parcels**
 - Phase
 - Strength
 - Value
 - Date



Project South Kenai 2D
 Client: City of Kenai
 Date: 08/27/2013
 Prepared by: Sarah Jones, GIS Analyst
 Checked by: Zane Adams, GIS Analyst
 Scale: 1:10,000
 Units: Feet



**South Kenai ZD
Test Line**

Preliminary Line Plan



- Legend**
- Land Use
 - E. Kenai ZD (Amended)
 - Tax Parcels
 - Private
 - Borough
 - State
 - Other



Project: South Kenai ZD
 Client: Kenai
 Location: Kenai Peninsula Borough, AK
 Date: 02/27/2023
 Prepared by: [Name]
 Checked by: [Name]
 Approved by: [Name]



MISCELLANEOUS LAND USE PERMIT GEOPHYSICAL EXPLORATION APPLICATION



State of Alaska
Department of Natural Resources, Division of Oil & Gas
550 W. 7th Ave, Suite 1100, Anchorage, AK 99501-3563
Phone: 907-269-8800 Fax: 907-269-8943
Permitting Email: dog.permitting@alaska.gov

| SECTION I: APPLICANT INFORMATION | |
|--|---|
| 1. Applicant: | 2. Applicant Contact: |
| Name: SAExploration Seismic Services (US), LLC | First Name: Ashley Last Name: Rogers |
| Mailing Address: 8240 Sandlewood Place, Suite 201 | Title: Permitting Coordinator |
| City: Anchorage | Is the Mailing Address the same as Applicant's Mailing Address? <input checked="" type="checkbox"/> Yes If "No", please provide information below: |
| State: AK Zip Code: 99507 | Mailing Address: Enter Mailing Address. |
| Phone: 907-522-4499 Fax: 907-522-4498 | City: Enter City. State: Enter State. Zip Code: Enter Zip Code. |
| Email: arogers@saexploration.com | Phone: Enter Phone. Fax: Enter Fax. |
| | Email: Enter Email. |
| SECTION II: THIRD PARTY INFORMATION (Fill out this section only if you are applying for the Applicant) | SECTION III: APPLICATION DATE AND NUMBER (FOR DIVISION USE ONLY) |
| Third Party Company Name: Enter 3rd Party Company Name. | Application Date: |
| First Name: Enter First Name. Last Name: Enter Last Name. | |
| Title: Enter Title. | |
| Mailing Address: Enter Mailing Address. | |
| City: Enter City. | |
| State: Enter State. Zip Code: Enter Zip Code. | |
| Phone: Enter Phone. Fax: Enter Fax. | |
| Email: Enter Email. | |
| Describe the affiliation to the Applicant: Describe your affiliation to the Applicant. | Application Number: |
| SECTION IV: PROJECT DESCRIPTION | |
| 1. Project Name: | Whiskey Gulch 2D Test Line |
| 2. Proposed Start Date: | 4/1/2023 |
| 3. Project Activities: | |
| A. Describe what and where: 2 D single seismic test line in the Cook Inlet area | |
| B. Number of Line Miles (2D) 5.4 and/or Square Miles (3D) Click here to enter text. | |

C. Waste Management:

Waste will be kept in designated areas and in vehicles. We will shovel up the contaminated snow, dirt, gravel, ice or any other contaminated material into plastic oily waste bags; pick up only contaminated substance with as little of the natural resource as possible. Oily waste bag inside another oily waste bag. This is a precautionary measure in case the first oily waste bag rips or the bag breaks.

Place contaminated absorbent material in oily waste bags, label, and place in designated areas: such as barrels, fish totes, duck ponds or secondary containment for the fuel bladders until the oily waste bags can be stored properly. Bags will be clearly, mark the contents of the bags with a felt marker to ensure proper disposal.

D. Staging and Storage Areas:

We will have a designated privately owned staging area.

E. Airstrips and Landing Zones:

The use of airstrips and/or landing zones is not anticipated for this project.

F. Historical Properties and Cultural Resources:

A Letter of Concurrence from the State of Alaska Historical Preservation Officer is anticipated in advance of the beginning of this program.

G. Anadromous Fish Streams and Other Streams:

244-10-10010-2011-3027, 244-10-10010-2011-3023, 244-10-10010-2011-3031, 244-10-10010-2011

4. Associated Structures:

A. Structures:

N/A

B. Other:

Private parcels

5. Type of Equipment:

Recorders, Boom Boxes, Radios, GPS, Land nodes, Marine nodes, Line viewers, auxiliary equipment, survey workstation, plotter, base station, trimble pack, clearwave charges, OSX charges, Loading poles, magazines, augers, tracked drills.

6. Other:

Click here to enter text.

SECTION V: SEQUENCE AND SCHEDULE OF ACTIVITIES

Are supplemental pages for Sequence and Schedule of Activities included in Appendix B? Yes No

| Project Milestone # | Project Milestone | Proposed Start Date | Proposed End Date |
|---------------------|---------------------|---------------------|-------------------|
| 1. | Advance Survey crew | 4/1/2023 | 4/10/2023 |
| 2. | 2D Survey | 4/11/2023 | 4/30/2023 |
| 3. | Demobilization | 5/1/2023 | 5/2/2023 |
| 4. | Enter Milestone. | Enter Date. | Enter Date. |
| 5. | Enter Milestone. | Enter Date. | Enter Date. |
| 6. | Enter Milestone. | Enter Date. | Enter Date. |
| 7. | Enter Milestone. | Enter Date. | Enter Date. |
| 8. | Enter Milestone. | Enter Date. | Enter Date. |
| 9. | Enter Milestone. | Enter Date. | Enter Date. |
| 10. | Enter Milestone. | Enter Date. | Enter Date. |

SECTION VI: LAND STATUS

State of Alaska Surface Lands:

Are supplemental pages for Land Status included in Appendix B? Yes No

Meridian, Township, Range, And Section(s): 004S 15W S21

Oil And Gas Mineral Estate Lessee: Hilcorp Alaska

Access Authorization(s): [Click here to enter text.](#)

Special Use Lands: ADL 393959

Jointly Managed Lands: [Click here to enter text.](#)

Other Considerations: [Click here to enter text.](#)

| Project Activities/Components | GPS Coordinates |
|---|---|
| Advance Survey | Click here to enter text. |
| 2D Survey | Click here to enter text. |
| Demobilization | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |

Meridian, Township, Range, And Section(s): 004S 15W S22

Oil And Gas Mineral Estate Lessee: Hilcorp Alaska

Access Authorization(s): [Click here to enter text.](#)

Special Use Lands: ADL 392666

Jointly Managed Lands: [Click here to enter text.](#)

Other Considerations: ADL 207079, ADL 212825, LAS 26653, ADL 74260, ADL 214785, DOT AA024612, QCD 718

| Project Activities/Components | GPS Coordinates |
|---|---|
| Advance Survey | Click here to enter text. |
| 2D Survey | Click here to enter text. |
| Demobilization | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |

Meridian, Township, Range, And Section(s): 004S 15W S23

Oil And Gas Mineral Estate Lessee: Hilcorp Alaska

Access Authorization(s): [Click here to enter text.](#)

Special Use Lands: ADL 392666

Jointly Managed Lands: [Click here to enter text.](#)

Other Considerations: ADL 17078, ADL 29482, ADL 34494, ADL 27092, LAS 8804, LAS 25356, TWUA A2020-116

| Project Activities/Components | GPS Coordinates |
|---|---|
| Advance Survey | Click here to enter text. |
| 2D Survey | Click here to enter text. |
| Demobilization | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |

Meridian, Township, Range, And Section(s): 004S 15W S24

Oil And Gas Mineral Estate Lessee: Hilcorp Alaska

Access Authorization(s): [Click here to enter text.](#)

Special Use Lands: ADL 392666

Jointly Managed Lands: [Click here to enter text.](#)

Other Considerations: ADL 17063, ADL 17078, ADL 216373, ADL 214785, QCD 718

| Project Activities/Components | GPS Coordinates |
|-------------------------------|---|
| Advance Survey | Click here to enter text. |
| 2D Survey | Click here to enter text. |

| | |
|--|---------------------------|
| Demobilization | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |
| Meridian, Township, Range, And Section(s): 004S 15W S25 | |
| Oil And Gas Mineral Estate Lessee: Hilcorp Alaska | |
| Access Authorization(s): Click here to enter text. | |
| Special Use Lands: ADL 392666 | |
| Jointly Managed Lands: Click here to enter text. | |
| Other Considerations: ADL 17078, ADL 18377, LAS 3396, LAS 23038, LAS 24233, LAS 24850, LAS 25355, LAS 26411, LAS 33981, LAS 26275, LAS 26283 | |
| Project Activities/Components | GPS Coordinates |
| Advance Survey | Click here to enter text. |
| 2D Survey | Click here to enter text. |
| Demobilization | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |
| Meridian, Township, Range, And Section(s): 004S 14W S28 | |
| Oil And Gas Mineral Estate Lessee: Hilcorp Alaska and Vision Resources, LLC | |
| Access Authorization(s): Click here to enter text. | |
| Special Use Lands: ADL 392496 & ADL 391210 | |
| Jointly Managed Lands: Click here to enter text. | |
| Other Considerations: ADL 17857, ADL 44477, ADL 44488, LAS 33982 | |
| Project Activities/Components | GPS Coordinates |
| Advance Survey | Click here to enter text. |
| 2D Survey | Click here to enter text. |
| Demobilization | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |
| SECTION VII: PERFORMANCE GUARANTY | |
| Bonded Company: The Guarantee Company | |
| Type: Statewide | Number: EM1148565 |
| Bonding Company: See bond on file | Amount: 100,000 |
| Mailing Address: Enter Mailing Address. | |
| City: Enter City. | State: Enter State. |
| Phone: Enter Phone. | Zip Code: Enter Zip Code. |
| Fax: Enter Fax. | Email: Enter Email. |
| SECTION VIII: INSURANCE | |
| Comprehensive General Liability Insurance: | |
| Amount of Insurance: 1,000,000 | |
| Insurer Name: Arthur Gallagher Risk Management Services | |
| Mailing Address: 1900 West Loop South | |
| City: Houston | State: TX |
| Phone: 713-623-2330 | Zip Code: 77027 |
| Fax: 713-622-6722 | Email: Enter Email. |
| SECTION IX: GLOSSARY OF TERMS | |

Are supplemental pages for Glossary of Terms included in Appendix B?

Yes

No

| Term # | Term | Term Definition |
|--------|-------------|------------------------|
| 1. | Enter Term. | Enter Term Definition. |
| 2. | Enter Term. | Enter Term Definition. |
| 3. | Enter Term. | Enter Term Definition. |
| 4. | Enter Term. | Enter Term Definition. |
| 5. | Enter Term. | Enter Term Definition. |
| 6. | Enter Term. | Enter Term Definition. |
| 7. | Enter Term. | Enter Term Definition. |
| 8. | Enter Term. | Enter Term Definition. |
| 9. | Enter Term. | Enter Term Definition. |
| 10. | Enter Term. | Enter Term Definition. |

SECTION X: CONFIDENTIALITY

The undersigned hereby requests that each page/section of this application marked confidential be held confidential under AS 38.05.035(a)(8).

APPLICANT CONTACT:



Signature

Ashley Rogers

Name

Permitting Coordinator

Title

2/13/23

Date



MISCELLANEOUS LAND USE PERMIT GEOPHYSICAL EXPLORATION APPLICATION



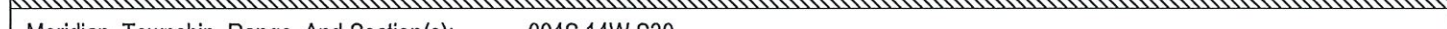
State of Alaska
 Department of Natural Resources, Division of Oil & Gas
 550 W. 7th Ave, Suite 1100, Anchorage, AK 99501-3563
 Phone: 907-269-8800 Fax: 907-269-8943
 Permitting Email: dog.permitting@alaska.gov

SECTION VI: LAND STATUS

State of Alaska Surface Lands:

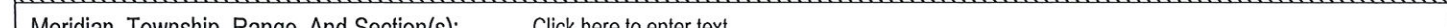
Meridian, Township, Range, And Section(s): 004S 14W S29
 Oil And Gas Mineral Estate Lessee: Hilcorp Alaska
 Access Authorization(s): [Click here to enter text.](#)
 Special Use Lands: ADL 392496
 Jointly Managed Lands: [Click here to enter text.](#)
 Other Considerations: ADL 227977, LAS 9222, LAS 21965, LAS 33928, LAS 33978, LAS 33982

| Project Activities/Components | GPS Coordinates |
|---|---|
| Advance Survey | Click here to enter text. |
| 2D Survey | Click here to enter text. |
| Demobilization | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |



Meridian, Township, Range, And Section(s): 004S 14W S30
 Oil And Gas Mineral Estate Lessee: Hilcorp Alaska
 Access Authorization(s): [Click here to enter text.](#)
 Special Use Lands: ADL 392496
 Jointly Managed Lands: [Click here to enter text.](#)
 Other Considerations: ADL 18753, ADL55740, LAS 607, LAS 33978, LAS 33981, LAS 33982, LAS 26279, LAS 26281, LAS 26282

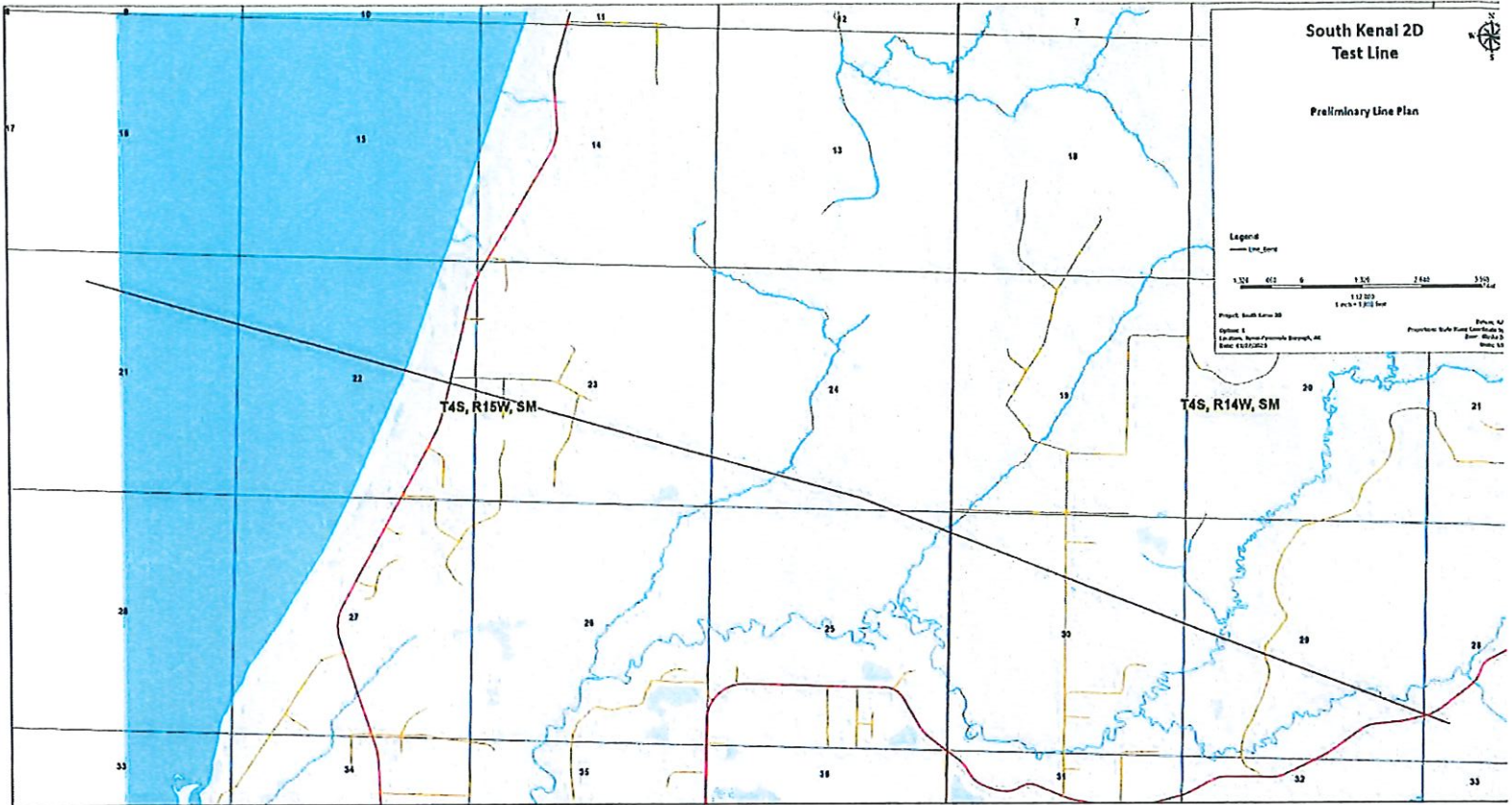
| Project Activities/Components | GPS Coordinates |
|---|---|
| Advance Survey | Click here to enter text. |
| 2D Survey | Click here to enter text. |
| Demobilization | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |



Meridian, Township, Range, And Section(s): [Click here to enter text.](#)
 Oil And Gas Mineral Estate Lessee: [Click here to enter text.](#)
 Access Authorization(s): [Click here to enter text.](#)
 Special Use Lands: [Click here to enter text.](#)
 Jointly Managed Lands: [Click here to enter text.](#)
 Other Considerations: [Click here to enter text.](#)

| Project Activities/Components | GPS Coordinates |
|---|---|
| Click here to enter text. | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |
| Click here to enter text. | Click here to enter text. |

APPENDIX A: MAPS



APPENDIX B: OTHER

Include other information here.



**Whiskey Gulch 2D Seismic Test Line
Program**

**Plan of Operations
by**

SAExploration Seismic Services, LLC

February 14, 2023

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Introduction

SAExploration Seismic Services, LLC (SAE) plans to acquire a 2D Test Line in the Whiskey Gulch area in the spring of 2023. Known as the *Whiskey Gulch 2D Test Line*, the program is expected to take up to 2 weeks to complete. SAE is an experienced seismic crew equipped for safe and environmentally responsible operations in all environments and conditions.

The Whiskey Gulch 2D line covers approximately 4.2 miles onshore and 1.2 miles offshore. SAE will use autonomous nodal seismic recording equipment in all three operating environments onshore, tidal and offshore. In the onshore environment, SAE will be testing a new “Clearwave directional explosive product” that is only .058kg and will be also testing it against a 1.1kg conventional explosive source to evaluate needs for subsurface imaging in the area. The new Clearwave product is shown and its benefits include potential reduction in costs, environmental impacts and reduced line clearing and drilling exposure.

Project Area and Plan

SAE intends to acquire the 2D seismic single test line that encompasses the land and waters in Cook Inlet generally around and north of Anchor Point. This program will begin approximately in early April and last for ~two weeks for all phases of the activity. In the onshore environment, SAE will drill and place both clearwave source at 55 foot intervals along the 2D line. SAE will also place the conventional source at 330 foot intervals.

Along the entire land onshore, SAE will place nodes ~27.5 feet apart but at 55 foot intervals in the tidal and marine environment.

Marine operations are in open water and close to the coast line.

Seismic Coverage and Basic Parameters

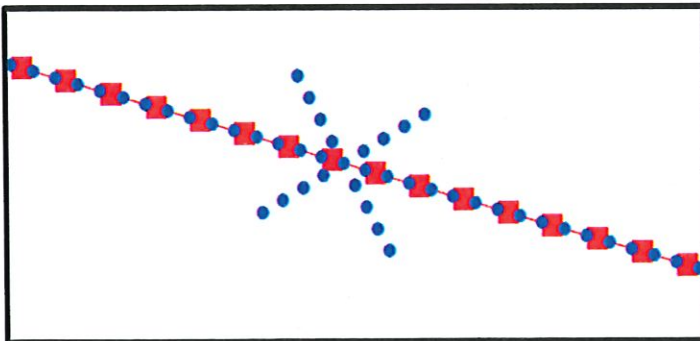
Survey Geometry

| Parameter | Distance |
|---|----------|
| Marine Receiver Point Interval | 55 ft |
| Land Receiver Point Interval | 27.5 ft |
| Marine Source Point Interval | 55 ft |
| Land Source Point Interval Clearwave | 55 ft |
| Land Source Point Interval Conventional | 330 ft |



Onshore Operations Summary

Onshore land operations will begin when the ground surface has sufficient snow coverage to allow for the use of light tracked vehicles to transport personnel and equipment. Tracked vehicles will be used for the deployment and retrieval of equipment and movement of drill equipment. Crews will mobilize in an area; survey and stake out the line, if necessary; drill source points; place nodes and record data. The onshore source footprint will not extend beyond the onshore/land area. Onshore source points will be the new directional “Clearwave product” 0.058kg and 3 shotpoints will be detonated at each location every 55 feet along the line.. The conventional, explosive charge sources using a charge size of 1.1kg will be located every 330 feet. at a depth of 25 feet and backfilled to prevent blowout and avoid open holes after shooting along a 2 mile portion of the line for comparison purposes.



Nodal operations will extend approximately 1 mile beyond the land area into the marine environment. This activity will be nodal layout/pickup operations only; no source will be accomplished in the transitional or offshore environment. Blue dots represent nodes; red dots represent shotpoints.

Marine Offshore Operations Summary

Marine operations will be a single 2D line extending offshore to layout the nodal devices. The offshore nodes will be tethered to allow for an efficient retrieval. After source acquisition onshore, the equipment will be retrieved, and data downloaded from the nodes. Approximate timing of nodes to be deployed will be 2-3 days.

Recording System

Seismic data will be acquired using autonomous nodal recording systems for operation in all three environments. Two different types of nodes will be used; one for the land and one for the transition and marine environment. For the land environment a single-component sensor land node will be used and for the transition and marine a submersible multi-component system made up of three velocity sensors and a hydrophone will be used. Both nodal systems have the ability to record continuous data.

Nodal System

| | |
|-----------------|---------------------------|
| Onshore | -GCL Geospace (900 nodes) |
| TZ and Offshore | -OBX 750 (96 nodes) |



The node charger and data harvesters will be located in Anchorage and all nodes will be sent back to Anchorage for downloading after the acquisition.. Timing for the systems will be sync'd off a GPS time stamp generated by the boom box or navigation system. A DTM system will be used in concert with the boom box or navigation system to monitor the timing and create a master time log of the data being recorded.

Figure 1- OBX marine node



Figure 2 Land node



Recording Equipment Deployment

The recording equipment will be delivered along open areas of line with snow machines, or light weight tracked vehicles such as this Kubota or 4 wheel ATV.

Positioning

Onshore Positioning - Primary positioning on land will be with a GPS. Source and receiver lines will be mark with survey lathe for crews to identify locations. Wilderness guides will identify safe routes for crews to follow in these areas.

Equipment

Drill Equipment

Shot hole drilling rigs would be smaller tracked vehicles that can cross snow or vegetation lightly with minimal footprint. Drill holes will be plugged and filled with cuttings that came from the hole. Additional sand may be used to fill the hole if needed.

The drilling contractor has estimated that the drills will average 40-50 holes per drill/day for the tracked drills and 20- 30 holes/drill/ day for the hand augers. Intertidal areas are expected to vary depending on the amount of sand encountered and detouring required. An average of 15 –20 holes/rig is expected.





Osx™ ClearWave™

Osx™ ClearWave™ is a seismic explosive booster which generates a near-planar shock wave.

Highly directional energy provides more efficient penetration into the ground than conventional explosives.

Benefits include potential reduction of survey costs & environmental impacts. Increased productivity by reduced line clearing and drilling exposure.

 ORICA

Osx ClearWave

Onshore Vehicle

Lightweight tracked equipment or snow machines will be used to support day to day activities for surveying and recording operations during winter months. Transition zone areas will be worked on foot or supported with small tracked or tired units with the ability to float in the event of mechanical failure. Summer operations will utilize either all terrain vehicles or four- wheelers.

Offshore Vessel Support

Nodal Deployment and Retrieval

The deployment and retrieval of the offshore nodal equipment will be accomplished with the use of a bow picker. The 32 foot bow picker will deploy and retrieve gear from the bow of the vessel. The vessels carry the nodal equipment on the deck in fish totes.

Waste Management & Disposal

All refuse and debris will be disposed of at an approved site. If there is not an approved disposal site at the staging area refuse and debris will be transported to an approved site in the Kenai Peninsula Borough, Matanuska Susitna Borough or Municipality of Anchorage. The ultimate disposal site will be dependent upon the location of seismic operations and most appropriate site. At the completion of seismic operations SAE will conduct a thorough review of the project area to ensure all debris has been picked up and properly disposed.

Alaskan and Regional Hire

SAE will maintain a high level of Alaskan and regional hire for the program. We will notify the public of our program during a community meeting or advertisements in the local paper.

Health, Safety & Environment

All personnel will be provided, at a minimum, with the following project specific orientation: Project Hazards, Permit Stipulations, Mitigation Measures, Emergency Response Plans, and Wildlife/Bear Awareness. SAE personnel and contractors will adhere to the SAE Safety Program Requirements. Prior to operating onshore, Wilderness Guides will conduct a thorough review of the project area to identify any bear dens. While operating onshore and in the transition zone a Wilderness Guide will be assigned to each crew. Personal protective equipment will be provided to all crews. The types of equipment utilized will be dependent upon the specific task and area deployed for each employee.

Archaeology

SAE has requested a review and concurrence to ensure that no listed AHRS inventory are located in the proximity of our operations and if there are, we will plan to ensure appropriate setbacks and avoidance during the scope of our work. During the field season, any new sites or reported sites to be found to have improper coordinates will be immediately reported the SHPO office in Anchorage.

Health & Safety Equipment

Personal protective equipment - including but not limited to:

- Mustang work suits
- Winter gear
- Steel-toed Extra tuffs
- Immersion suits
- Hard hats/Reflective Vests

Equipment List

| Equipment | |
|-------------------------|------|
| Recording | |
| Recorder | 1 |
| Boom Boxes | 6 |
| Radios | 14 |
| GPS handhelds | 14 |
| Nodes land | 1200 |
| Nodes Marine | 100 |
| Line Viewers | 3 |
| auxilliary equipment | 1 |
| Survey | |
| Workstation | 1 |
| Plotter | 1 |
| Base station | 1 |
| Trimble packs | 2 |
| Drilling | |
| Clearwave Charges | 1400 |
| OSX charges | 24 |
| Loading Poles | 4 |
| Magazine | 1 |
| Augers | 3 |
| Tracked drills | 2 |
| Drill accessories Parts | 1 |

Anticipated Permit Requirements

| PERMITS | AGENCY |
|---|---|
| FEDERAL | |
| Nationwide 6 Permit | US Corps of Army Engineers |
| STATE | |
| Geophysical Land Use Permit | Alaska Department of Natural Resources Division of Oil and Gas |
| Fish Habitat Permit (“Title 16 permit”) | Alaska Department of Fish and Game |
| Letter of Concurrence | State of Historic Preservation Office |
| Fish Habitat Permit | Alaska Department of Fish and Game |
| LOCAL | |
| Land Use Permit | Kenai Peninsula Borough |
| Land Use Permit | Ninilchik Native Association |
| OTHER | |
| Letters of Non-Objection | Affected lease owners |
| Land Use Permit | University of Alaska |
| Private Permits | Landowners |

Spill Clean Up Procedure

SAE/SAE are committed to protecting the environment in which it conducts its operations. It attempts to prevent leaks and spills through the strict use of secondary containment, drip pads/pans and daily equipment inspections. In an event the engineering controls in place fail, the following procedure shall be followed:

Immediate Actions

- Stop source of leak immediately.
- Call for immediate help if needed.
- Use absorbent pads to contain leak.
- Get extra help to clean up spill immediately.
- Contact QHSE Field Coordinator for appropriate reporting of spill.
- Fill out spill report form and turn in by the end of your work shift.

Collection

Shovel up the contaminated snow, dirt, gravel, ice or any other contaminated material into plastic oily waste bag; pick up only contaminated substance with as little of the natural resource as possible. Place oily waste bag inside another oily waste bag. This is a precautionary measure in case the first oily waste bag rips or the bag breaks.

Place contaminated absorbent material in oily waste bags, label, and place in designated areas: such as barrels, fish totes, duck ponds or secondary containment for the fuel bladders until the oily waste bags can be stored properly.

Clearly, mark the contents of the bags with a felt marker to ensure proper disposal.

Storage

Ensure the top of the bags are tied shut and place them in a secondary containment or a barrel with a sealable top at camp.

Disposal

Cook Inlet or Kenai Peninsula:

Label all barrels that have hazardous waste to later be disposed of with the Alaska Pollution Control.

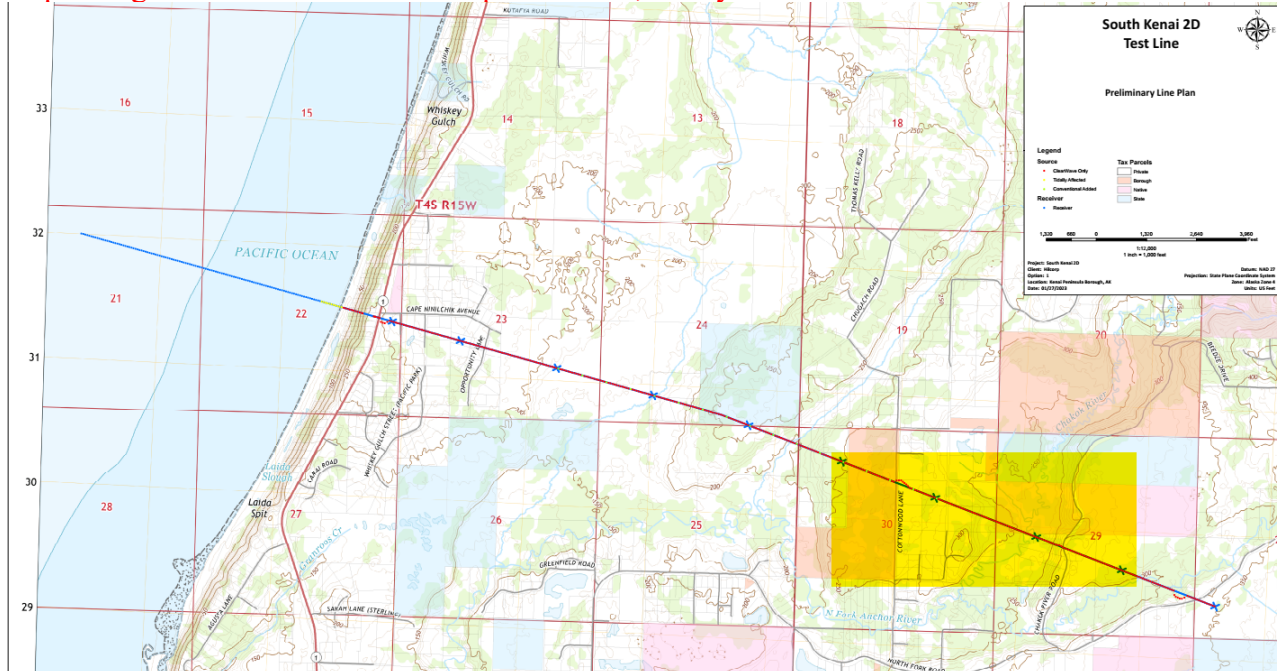
Application Follow Up Questions

Questions: Asked by Alaska State Agencies

Answers: Provided by SAExploration Seismic Services, LLC (SAE)

1. Where is the conventional source being placed? Please pinpoint the 1.8 miles of the seismic line where this occurs.

a. Depending on landowner access and permissions, it may be in this stretch of line.



2. If a landowner denies consent how will you proceed?

a. We will try to permit a landowner next to the line if not too far away or skip the line at that property.

3. How are you mitigating risk to the bluff?

a. We will maintain an appropriate setback from the bluff to avoid any disturbance, at a minimum 50 ft.

4. How will you handle public use areas on or adjacent to this project?

a. Appropriate signage will be deployed on all public access routes and roadways in the project area. Existing roads and trails will be used for off-road travel where practical and in a manner that prevents damage to ground surface and vegetative mat.

5. How will you avoid interfering with fish activities?

a. We plan on a 50-foot setback at minimum from all anadromous streams for our shothole activities. Additionally, due to the sandbar running parallel to shore and consequently the dynamic nature of the mouth of this river we will keep a 50-foot buffer from the stream connection at the toe of the bluff. Also, we will not be traveling across streams with any motorized vehicles; there is sufficient road access for all our movement in and around the line and the streams in the area without stream crossings.