For Office Use Only	ADNR File No: 233396	DATE STAMP: Recvd 4/21/25
	ADF&G No:	Edits recvd 5/20/25

Alaska Aquatic Farm Program
Joint Agency Application – Amendment Request

This form is for use in amending the aquatic farm lease and operation permit authorizations.

The project location is in: ☐ **Southeast Alaska** ☒ **Southcentral Alaska** ☐ **Kodiak** ☐ **Alaska Peninsula** ☐ **Other**

A. Applicant Information

ROYAL OCEAN KELP CO.
Name

ADL 233396
ADNR Lease ADL No.

2019-103-AF-SC
ADF&G AFOP No.

Business Name (If Applicable)

PO BOX 1566
Mailing Address (PO Box or Street Address)

CORDOVA AK 99574
City State Zip

Private Information

Email Address

907 253 5266 907 201 1512
Home/Office Phone Cell Phone

B. Proposed Amendment

Check Modifications That Apply

☒ Modify aquatic farm site boundaries/locations

AND

☒ Increased Area
☐ Reduced Area
☒ Move Farm Boundaries

Information Required for Review

☐ Section C
☐ Section D including Maps and Diagrams

☐ Add or significantly[1] modify support facility

☐ Section E (If floating facility)
☐ Sections E & F (If upland facility)
☐ Section D-3 c (Site Plan Map with facility)
☐ Section D-3 d (Cross Sectional Diagram of facility)
☐ Section D-3 e (Detailed Drawing of facility)

☐ Other[2] _____ Dependent on amendment request

[1]Significant modifications include changes that increase obstructions to navigation or to other public uses.
[2]Other includes production changes or species added if associated with changes to farm site boundary/location.

C. Amendment Description

In the space provided below, please provide a general description of your proposed changes to your aquatic farm site and operations. This should be a narrative of your amendment request that includes changes to your project location or size, new overall size including any hardening areas, all species you intend to culture, type of farm gear, equipment, support facilities, and associated housing to be used including size, number, and construction materials. Your narrative should match the rest of the application information you provide. If a section does not apply to your proposed amendment, please state so. If additional space is necessary, **please attach a separate document labeled "AMENDMENT DESCRIPTION".** **Example information for project narrative can be found in Attachment I.**

Company Name *(if being changed)*

Site Location Modifications

Our original design of 10 grow-lines each 1000' in length was not optimal for creating and sustaining tension on the kelp grow-lines. We changed our design to the catenary system of having 16 grow-lines each 400' in length. This results in the actual farm dimensions to be about 200' X 400'. The catenary system requires two large anchors set 90 degrees from each other at each corner of the farm. For our farm dimensions we are submitting 8 coordinates that represent the retrieval lines for each of the 8 corner anchors. The farm is not a perfect rectangle, but is shaped more like an octagon.

See attached Project Description

New Site Dimensions, Acres for Each Parcel (*New Dimensions and calculated area in acres for each parcel being amended and total area in acres of farm after amendment)*
The perimeter is 2031 feet, the acreage is 6.16

New Support Facilities *(List any new support facilities, i.e. caretaker, storage, processing facilities, work rafts, etc.)*

N/A

N/A

Construction Materials of New Support Facilities and Equipment *(Note: All floating raft structures should use non-treated wood supported by closed cell expanded polystyrene or equivalent material)*

N/A

Species You Intend to Farm (for New Parcels or Changes to Species) [*Include scientific and common species name*]

Bull kelp, Nereocystis leutkeana
Split kelp, Saccharina groenlandica
Three ribbed kelp, Cymathere triplicata
Ribbon kelp, Alaria marginata
Sugar kelp, Saccharina latissima

For New Parcels or Changes to Culture Methods [*Describe operation activities to be done onsite such as outplanting of seedstock, husbandry techniques to be used (culling, sorting, washing, etc.), maintenance and monitoring activities, management of fouling organisms and incidental species, predator control measures, and schedule of activities such as timing of outplanting seeded lines or adding seedstock into trays, etc. Describe what methods you plan to use based on the definition in **5 AAC 41.400(6)**. "Culture" means to use or the use of methods to manipulate the biology and the physical habitat of a desired species to optimize survival, density, growth rates, uniformity of size, and use of the available habitat, and to efficiently produce a product suitable for a commercial market.*]

PARCEL 1 will contain 16 -32 400 ft longlines for culture of aquatic plants. Submerged longlines will be installed seasonally in October. Each line will be suspended 5 feet below the surface using buoys to maintain distance to the surface. Harvest will occur in May and all culture gear removed. Anchors and mooring buoys will remain onsite year round.

See attached Project Description

For New Parcels or Changes to Culture Gear and Equipment (Type, Size, Number, Configuration, Material, and Anchoring System) [*If more than one parcel, indicate what parcel specific gear will be located on. If more than one species, indicate gear to be used for each. Gear includes any structure that holds or protects the organism like trays, tiers of lantern nets, Vexar bags, OysterGro system, grow-out submerged longlines, predator netting, longlines, buoys, depth control systems, etc. Include approximate installation schedule, or if and what gear will remain installed year-round etc.*]

Eight Corner Buoys

E1 - NE corner Anchor #1 60° 33.764'N 145° 57.521'W
NE -NE corner Anchor #2 60° 33.772'N 145° 57.552'W

NW - NW corner Anchor #1 60° 33.808'N 145° 57.696'W
W1 - NW corner Anchor #2 60° 33.798'N 145° 57.748'W

W2 - SW corner Anchor #1 60° 33.767'N 145° 57.769'W
SW - SW corner Anchor #2 60° 33.740'N 145° 57.737'W

SE - SE corner Anchor #1 60° 33.713'N 145° 57.577'W
E2 - SE corner Anchor #2 60° 33.730'N 145° 57.524'W

Other *(Anything else that may change from the original project due to the amendment request proposal)*

D. REQUEST FOR SITE BOUNDARY/LOCATION MODIFICATIONS (if applicable)

1. Coordinates

If this amendment request involves modifying the farm site boundaries, please provide new latitude and longitude coordinates for each corner of each parcel at the farm site you are requesting to modify. Parcel designations (number and name) must be the same as in the original lease/permit if modifying existing parcels. Identify each parcel to be used. For example, Parcel 1 - growing area, Parcel 2 - hardening area, etc. Latitude and longitude coordinates must be in **NAD83 datum using degrees and decimal minutes format to the nearest .001 minute (Example: Longitude -133° 17.345)**, obtained using a Global Positioning System (GPS). If you are applying for more than three parcels or your proposed parcels have other than four corners, please provide those coordinates in your project description or on a separate sheet.

Parcel 1: 6.16 (e.g. Grow-out Area)	NE Corner No. 1: Latitude	see above	Longitude _____
	SE Corner No. 2: Latitude	_____	Longitude _____
	SW Corner No. 3: Latitude	_____	Longitude _____
	NW Corner No. 4: Latitude	_____	Longitude _____
Parcel 2: _____ (e.g. Hardening Area)	NE Corner No. 1: Latitude	_____	Longitude _____
	SE Corner No. 2: Latitude	_____	Longitude _____
	SW Corner No. 3: Latitude	_____	Longitude _____
	NW Corner No. 4: Latitude	_____	Longitude _____
Parcel 3: _____ (e.g. Support Facility Area)	NE Corner No. 1: Latitude	_____	Longitude _____
	SE Corner No. 2: Latitude	_____	Longitude _____
	SW Corner No. 3: Latitude	_____	Longitude _____
	NW Corner No. 4: Latitude	_____	Longitude _____

2. Site Size

Please use the following formula to compute area. For more complex parcel shapes, you may wish to use the Measure Area tool in Alaska Mapper found at https://mapper.dnr.alaska.gov/. If you are applying for more than three parcels or your parcels are not rectangular, you may provide this information in the project description or on a separate sheet.

1. To compute the total area (sq. ft), multiply the width (ft) by the length (ft) of Parcel 1. The outside length and width of the Parcel **must include your anchors and anchoring system plus any scope**.
2. Divide the area (sq. ft) of Parcel 1 by 43,560, to convert the area from sq. ft to acres.
3. Repeat for each separate Parcel of your proposed amended farm site.
4. Add the acreage of each Parcel to get the total tideland acreage for your proposed amended farm site.
5. Write the Total Acreage on the line where indicated.
6. Note that the number of acres must correspond to your farm site maps and drawings.

Parcel 1: _____ feet (x) _____ feet = 268,275 square feet (÷) 43,560 = 6.16
(Width of Parcel 1) (Length of Parcel 1) (Area) (Acres)

Parcel 2: _____ feet (x) _____ feet = _____ square feet (÷) 43,560 = _____
(Width of Parcel 2) (Length of Parcel 2) (Area) (Acres)

Parcel 3: _____ feet (x) _____ feet = _____ square feet (÷) 43,560 = _____
(Width of Parcel 3) (Length of Parcel 3) (Area) (Acres)

How many total acres of state-owned tidelands are you applying for (add all parcel acres): 6.16 **(Total Acreage)**

If you are **also** applying for **state owned uplands for support facilities**, how many total upland acres? _____ **(Total Upland Acreage)**

3. Maps and Diagrams

Provide copies of maps and diagrams including general and detailed location maps, site plan map (an overview), cross-sectional diagram and detailed drawings. If the project has multiple parcels, you must provide maps of each parcel. Copies of the maps and drawings should be no larger than 8½" x 11" (standard letter size). Examples are provided at the end of the application.

A list of mapping resources is provided below:

Alaska Mapper	https://mapper.dnr.alaska.gov/
Alaska Ocean Observing System Mariculture Map	https://mariculture.portal.aoos.org/
NOAA Nautical Charts	www.charts.noaa.gov
ShoreZone Mapping System	https://www.fisheries.noaa.gov/alaska/habitat-conservation/alaska-shorezone
Catalog of Anadromous Streams	https://www.adfg.alaska.gov/sf/sarr/awc/

***Be sure to include a legend box on all maps and diagrams you provide with your application with the following information:**

FORMATTING

Figure No. and Title
Applicant Name (Business Name)
Waterbody
Area/Region
Today's Date

LEGEND BOX EXAMPLE

Figure 1 Detailed Location Map
Alaska's Best Oysters
Jerryton Bay
East of Prince of Wales Island, Southeast AK
March 30, 2012

a. **General Location Map** - This map is a larger scaled map showing larger surrounding area with less detail (See Attachment 2, Figure 1). Use a USGS Topographic quadrangle map (scale: 1" = one mile (1:63,360)) and label it "Figure 1" and show the following information:

- ☒ USGS Map Name (e.g. Craig B-4) Cordova C-6 SE Cordova C-5 SW
- ☒ General location of the farm site
- ☒ Distance (in nautical miles), and direction (arrow) of the site from the nearest community
- ☒ A directional arrow identifying North
- ☒ Scale
- ☒ Legend box (example on previous page)

b. **Detailed Location Map** - This map is a smaller scaled map showing more detail. Use a National Oceanic and Atmospheric Administration (NOAA) navigational chart and label it "Detailed Location Map" and show the following information:

- ☒ NOAA Chart No. 16709
- ☒ Boundaries of each farm area parcel and clearly label all corners (NE, SE, SW, and NW)
- ☒ Directional arrow identifying North
- ☒ Scale on map
- ☒ Legend box (example on previous page)

If uplands area is proposed:

- ☐ Location and type of use (e.g. housing, storage shed, etc.)

c. **Site Plan Map** - Draw an overhead view of the new or adjusted farm area parcel(s) and surrounding area. Label it "Site Plan Map" and show the following information:
- ☒ All in-water structures and anchoring systems (All anchoring systems and anchor scope have to be inside the farm parcel boundary)
- ☐ All equipment and support facilities with dimensions (in feet)
- ☒ Areas of eelgrass beds (intertidal zone)
- ☒ Areas of kelp beds (subtidal zone)
- ☐ Fuel and chemical storage
- ☒ Nearby anadromous streams (fish)
- ☐ Distance between all facilities, gear or equipment on the proposed farm site
- ☒ Legend box (example on previous page)

d. **Cross-Sectional Diagram(s)** - Provide Cross-Sectional Diagram(s) of all new support facilities, equipment, and gear showing their placement and anchoring systems. Note that more than one diagram may be required. Label it "Cross-Sectional Diagram" and show the following information:
- ☒ Distance from bottom of gear to ocean bottom at mean lower low tide
  If suspended or on-bottom culture:
  - ☒ water depth at low tide
  - ☒ major on-bottom physical features (sand, mud, silt, clay, bedrock, cobble, shells, rockweed, algae/seaweed) and contours
- ☒ Dimensions of the anchoring configuration and poundage
- ☒ Scale
- ☒ Legend box (example on previous page)

e. **Detailed Drawing(s)** - Provide Detailed Drawing(s) of all new support facilities, equipment, and gear. Note that more than one diagram may be required. Label and show the following information:
- ☐ Draw and label the dimensions (length/width/height) of all proposed gear and equipment
- ☐ Legend box (example on previous page)

E. REQUEST FOR SUPPORT FACILITIES (if applicable) N/A

1. Your proposed floating personnel/caretaker housing is located on (check one) a lease site ☐ or new acreage ☐

2. The proposed personnel/caretaker housing size (in feet) will be: _____ (width) _____ (length) _____ (height)

3. What would be the maximum number of people housed per day? _____

4. Will there be any sewage discharge from any of the personnel/caretaker housing? **Yes** ☐ **No** ☒
(Note: To ensure that your growing area can meet water quality standards and be classified by Alaska Department of Environmental Conservation (ADEC) no sewage discharge from a facility will be allowed within 300 feet from the boundary of a ADEC classified growing area. All other discharges will be evaluated separately by ADEC.

Annual rent for associated housing facilities will be determined by fee schedule, reviewed every two years by the Department of Natural Resources Appraisals Section to comply with the two-year age provision of AS 38.05.840. You may stay a maximum of 14 consecutive days at your site on state-owned uplands or tidelands without applying for personnel/caretaker housing.

F. REQUEST FOR NEW UPLAND PROPERTY (if applicable)

1. If you are applying for new state-owned uplands for support facilities, how many total upland acres are you applying for? No
2. Do you currently lease upland property adjacent to, or near, the current farm site in conjunction with your proposal? **Yes** ☐ **No** ☒
3. If you are the adjacent upland owner, are you applying for a preference right under 11 AAC 63.040(f)? **Yes** ☐ **No** ☒
4. Are you proposing to use an outhouse and septic systems on the upland property? **Yes** ☐ **No** ☒
   Outhouse and septic systems must maintain a minimum 100-foot horizontal separation distance from surface waters and a minimum of 4-foot vertical separation distance from the high ground water table. Additional information may be required by DEC depending on the type and complexity of the wastewater system proposed. Please contact the DEC Shellfish Program Coordinator at (907) 269-7636 with any questions.

G. AS 38.05.035(a) authorizes the director to decide what information is needed to process an application for the sale or use of state land and resources. This information is made a part of the state public land records and becomes public information under AS 40.25.110 and 40.25.120 (unless the information qualifies for confidentiality under AS 38.05.035(a)(8) and confidentiality is requested, AS 43.05.230, or AS 45.48). Public information is open to inspection by you or any member of the public. A person who is the subject of the information may challenge its accuracy or completeness under AS 44.99.310, by giving a written description of the challenged information, the changes needed to correct it, and a name and address where the person can be reached. False statements made in an application for a benefit are punishable under AS 11.56.210. In submitting this form, the applicant agrees with the Department to use "electronic" means to conduct "transactions" (as those terms are used in the Uniform Electronic Transactions Act, AS 09.80.010 – AS 09.80.195) that relate to this form and that the Department need not retain the original paper form of this record: the Department may retain this record as an electronic record and destroy the original. In submitting this form, the applicant certifies that he or she has not changed the original text of the form or any attached documents provided by the Division.

H. APPLICATION SIGNATURE BLOCK

AQUATIC FARM AMENDMENT CERTIFICATION STATEMENT

The information contained in this aquatic farm application is true and complete to the best of my knowledge and I certify that the proposed activity complies with and will be conducted in a manner consistent with all State and Federal Agency policies and regulations. I understand that modifications to the proposed activity may require additional review and that I may need to apply for additional authorizations.

This certification statement does not provide authorization necessary to sell my product. I understand I must separately apply for and hold a Growing Area Certification and a Shellfish Harvester or Shellfish Dealer Permit from the Department of Environmental Conservation.

Printed Name Thea Thomas

Signature of Applicant Thea Thomas **Date** 4/20/25

Printed Name Cale Herschleb

Signature of Applicant Cale Herschleb **Date** 4/20/2025

☒ **I have enclosed the amendment application fee required under 11 AAC 05.230(d)(3)(A)(E)(i)-(ii)**

In submitting this form, the applicant certifies that he or she has not changed the original text of the form, or any attached documents provided by the Division. This information is made a part of the state public land records and becomes public information under AS 40.25.110 and 40.25.120 (unless the information qualifies for confidentiality under AS 38.05.035(a)(8) and confidentiality is requested, AS 43.05.230, or AS 45.48. Public information is open to inspection by you or any member of the public. A person who is the subject of the information may challenge its accuracy or completeness under AS 44.99.310, by giving a written description of the challenged information, the changes needed to correct it, and a name and address where the person can be reached. False statements made in an application for a benefit are punishable under AS 11.56.210. In submitting this form, the applicant agrees with the Department to use "electronic" means to conduct "transactions" (as those terms are used in the Uniform Electronic Transactions Act, AS 09.80.010 - AS 09.80.195 that relate to this form and that the Department need not retain the original paper form of this record: the department may retain this record as an electronic record and destroy the original.

SAMPLE INFORMATION TO INCLUDE IN PROJECT DESCRIPTION OUTLINE

The proposed aquatic farm site is composed of four separate parcels located on state-owned tidal and submerged lands, totaling about 6.82 acres. Parcels include:

- *growing area measuring 292 ft x 546 ft (3.66 acres) for subtidal suspended culture of Pacific oysters using grow-out raft and cage system (Parcel 1);*
- *intertidal area measuring 60 ft x 154 ft (0.21 acre) for hardening and defouling (Parcel 2);*
- *support facility area measuring 46 ft x 190 ft (0.20 acre) for a dock and storage (Parcel 3);*
- *Seasonal growing area measuring 200 ft x 600 ft (2.75 acres) for submerged growing lines for culture of ribbon and sugar kelp (Parcel 4).*

The proposed aquatic farm is located about 24.7 nautical miles south-southwest of Wrangell near Rocky Bay, a small bay near the mouth of Mosman Inlet on Etolin Island in southeastern Alaska. (Attachments 1-5)

Parcel 1 will hold eight (8) – 16 ft by 20 ft oyster grow-out rafts. Each grow-out raft will use 100 to a maximum of 300 Aquamesh cages stacked 10-high. Each cage will measure 22 inches wide x 22 inches long x 6 inches deep, manufactured of 1- inch by 1-inch PVC coated wire mesh. The 6 ft stacks of cages would hang 8 ft under the water's surface. In addition, in the southwestern portion of the parcel, a 40 ft x 40 ft processing float with one 16 ft x 16 ft work shed, a covered area, and two 20 ft x 4 ft work platforms on each side will be used to accommodate oyster grow-out rafts during processing. The anchor system for all rafts would consist of floating anchor lines from each corner secured using 300 lb concrete anchors in water 60 ft deep. All rafts are constructed of untreated local wood with floatation made of closed cell (extruded) expanded polystyrene (Attachments 6 – 10).

Parcel 2 will be used for hardening and defouling of Pacific oysters, using Aquamesh trays measuring 22 inches wide by 22 inches long by 6 inches deep (Attachment 11).

Parcel 3 will be for support facilities. A dock measuring 20 ft x 30 ft will be anchored on this parcel for storage of gear. Two 100-pound Danforth anchors and chain will be installed on year 2 and remain year-round. (Attachment 12)

Parcel 4 will contain 20 – 400 ft longlines for culture of aquatic plants. Submerged longlines will be installed seasonally in October. Each line will be suspended 7 feet below the surface with depth-control systems with dropper weights and buoys. Harvest will occur in May and all culture gear removed. Anchors and mooring buoys will remain onsite year-round.

Upland facilities and support structures are located on National Forest Service lands adjacent to the farm site. Access to the site is by skiff from the adjacent uplands. Equipment and gear storage will be located on the permitted uplands or in Ketchikan.

ROYAL OCEAN KELP CO.
Project Description

Site Location

The Royal Ocean Kelp Company(ROKC) is submitting an application to amend our aquatic farm lease and operation permit. We would like to modify our aquatic farm site boundaries and location and to increase the area. We purposely moved our farm farther towards the back of the bay to be in closed fishing waters, so as to not interfere with a traditional salmon seine fishing area. Our original design of 10 grow-lines each 1000' in length was not feasible for creating and sustaining tension on the kelp grow-lines. We modified our design to the catenary system, having 16 to 32 grow-lines each 400' in length. This results in an actual grow area to be about 200' X 400'. The catenary system requires two large anchors set 90 degrees from each other at each corner of the farm. For our farm dimensions we are submitting 8 coordinates that represent the retrieval lines for each of the 8 corner anchors. The farm is not a perfect rectangle, but is shaped more like an octagon. Each Catenary is 100' X. 400'.

Our farm is located in Windy Bay on the north side of Hawkins Island in eastern Prince William Sound (PWS) in south-central Alaska. Windy Bay is approximately 13 nautical miles from Cordova, Alaska. Windy Bay was chosen because of its geography and bathymetry, its proximity to Cordova and for its history as an aquatic farming site for many years, with previous water quality testing and site permitting. The farm site in Windy Bay will be accessed from Cordova, Alaska.

Site Dimensions

PARCEL 1 will contain 16 to 32 – 400 ft longlines for the culture of aquatic plants. Submerged longlines will be installed seasonally in October. Each line will be suspended below the surface using buoys to keep the lines within 5' of the surface. Harvest will occur in May and all culture gear removed. Anchors and mooring buoys will remain onsite year round.

The kelp farm is one parcel and octagonal in shape. We very purposely moved our farm farther towards the back of the bay to be in closed fishing waters, so as to not interfere with a traditional salmon seine fishing area. The square footage of the farm would be 268,275-square feet , with a perimeter of 2031' covering 6.16 acres.

The corners are located at:

E1 - NE corner Anchor #1	60° 33.764'N	145° 57.521'W	E1-NE = 107 FT
NE - NE corner Anchor #2	60° 33.772'N	145° 57.552'W	NE-NW = 478 FT
NW - NW corner Anchor #1	60° 33.808'N	145° 57.696'W	NW-W1= 165 FT
W1 - NW corner Anchor #2	60° 33.798'N	145° 57.748'W	W1-W2 = 199 FT
W2 - SW corner Anchor #1	60° 33.767'N	145° 57.769'W	W2-SW = 189 FT
SW - SW corner Anchor #2	60° 33.740'N	145° 57.737'W	SW-SE = 503 FT
SE - SE corner Anchor #1	60° 33.713'N	145° 57.577'W	SE-E2 = 184 FT
E2 - SE corner Anchor #2	60° 33.730'N	145° 57.524'W	E2 -E1 = 195 FT

Species

The ROKC is permitted to grow five species of kelp:

Bull kelp, Nereocystis leutkeana
Split kelp, Saccharina groenlandica
Three ribbed kelp, Cymathere triplicata
Ribbon kelp, Alaria marginata
Sugar kelp, Saccharina latissima

Culture Method

The source of our seed spools will be from either of the permitted hatcheries Alutiiq Pride Marine Institute in Seward, Alaska or the Prince William Sound Science Center in Cordova, Alaska. For the last four years we have collected the mature sorus tissue within 50 km of our farm and transported the sorus tissue either to Cordova to PWSSC or to Seward to APMI. When the seed spools are ready for out-planting, the spools will be stabilized in coolers and transported from the permitted hatchery to our Windy Bay site by vessel from Cordova, Alaska.

The sporophytes will be out-planted on the submerged suspended grow lines in mid to late October. The seeded lines are left in place for approximately 6 months and harvested in late April or early May. The grow lines will be removed at the time harvest and transported to Cordova to be cleaned and prepared for the next season. The Royal Ocean team would plan on visiting the farm site every two weeks to check the growth of the kelp, adjust crossed lines and check on buoys.

Gear

The ROKC kelp farm consists of one parcel with two catenaries each with 8-16 submerged 400' parallel 3/8" poly grow-lines. The grow-lines are approximately 5' below the surface and spaced 5 to 10 feet apart. This results in 6400 to 12,800

feet of seeded grow-line. The actual grow area is 200' X 400'. We have placed A2 or A3 buoys placed every 50' to 100' along each grow-line. We have up to 60+ buoys on the farm. The catenary system requires two large Danforth anchors set at 90 degrees at each corner of the farm. We have 4-500 lb and 4-300 lb anchors at each corner set at 90 degrees. We also have 2-250 lb Danforth anchors placed at the center of the short end of the catenary. For our farm dimensions we are submitting 8 coordinates that represent the retrieval lines for each of the 8 corner anchors. The anchor, retrieval and the perimeter lines are all 1" Samson line. After harvesting the kelp, all of the grow lines will be removed from the farm site in Windy Bay. The lines will be cleaned, dried and stored on private property in Cordova, Alaska. In the fall the grow lines will be reinstalled and reused. The anchors at the Windy Bay farm site will remain in place.

The anchor retrieval lines will be secured to the anchor crown lines to insure that no loose lines are in the water to reduce any opportunity for whale entanglement.

Harvest

Harvest will take place in late April or early May. Determining the exact time to harvest will depend on the intended use of the kelp, the constraints of the processor and the quality of kelp desired. The kelp will be placed into totes on deck of the vessel for transport to the processing facility in Cordova, or the grow-lines will be transported to an at-sea-processor. Each one foot length of grow line should produce 2 lbs of wet weight kelp. When fully developed the farm will conservatively produce 12,000-24,000 lbs. kelp. Monitoring for the kelp farm will include bi-monthly trips to the site (weather dependent) for plant sampling and structure inspection and maintenance. The plants will be monitored for biofouling.

Support Facilities

There will not be any support facilities at the Windy Bay site.

Access to and from Site

Access to and from the site, transport of seed spools, out planting, bimonthly observation/maintenance trips and harvest will be done using the FV Myrmidon, a 32' diesel jet bowpicker owned by Thea Thomas or FV Celtic Lady, a 46' PWS seiner owned by Cale Herschleb.

Storage Location of equipment

Any equipment when not in use, will be stored in a private property in Cordova, Alaska and reinstalled during out-planting in October.

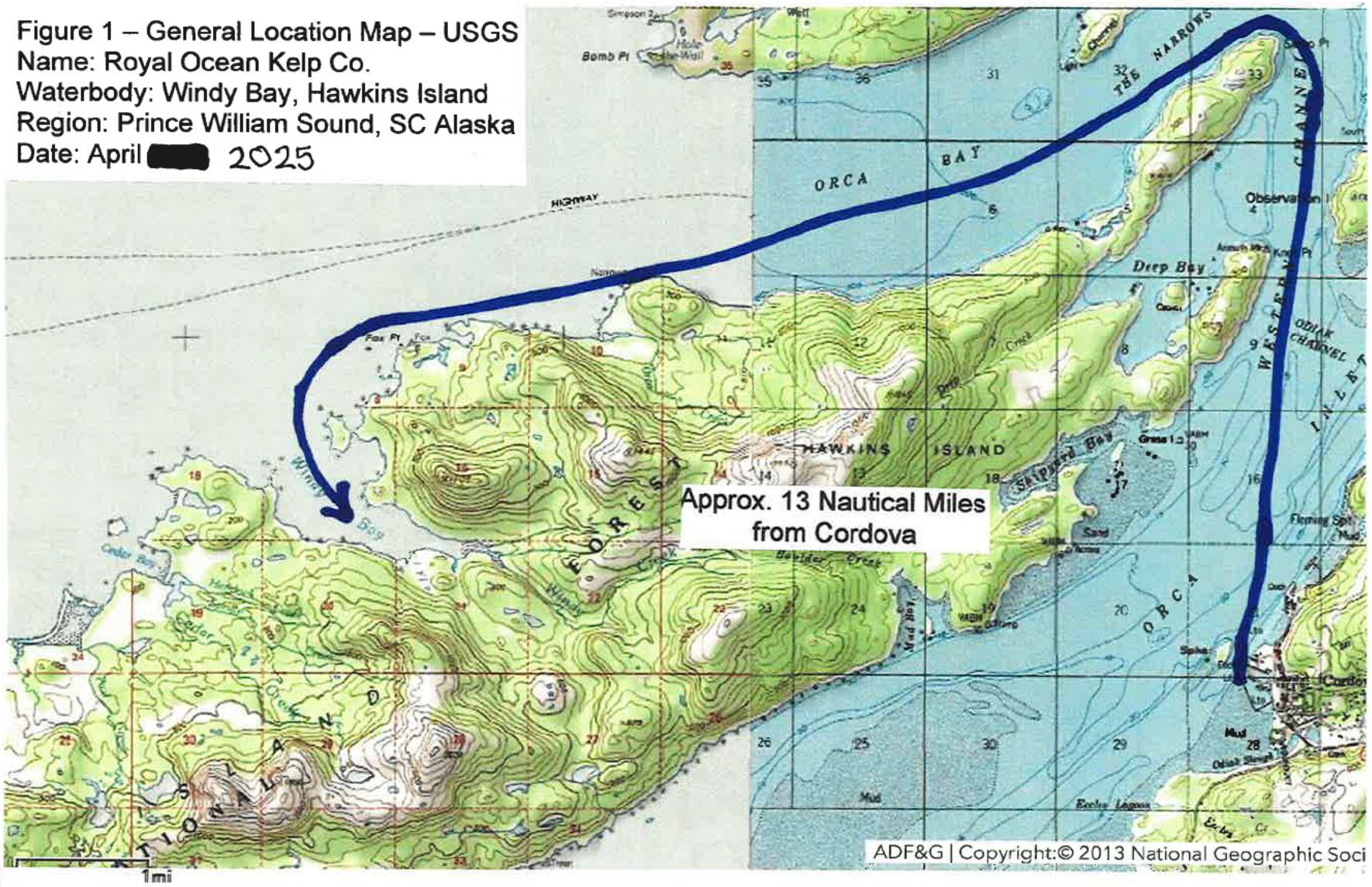
Supplemental Information

The US Forest Service lands surrounding Windy Bay are used for recreational hunting of Sitka Black-tailed deer(Odocoileus hemionus sitkensis). Local hunters from Cordova bring small vessels into Windy Bay from the first of August to the end of December. Hunting occurs on the uplands of Hawkins Island and access to the shoreline by hunters will not be impeded. The ROKC kelp farm would not interfere with anchoring of small vessels or access to the shoreline. The sport fishing that occurs in and around Windy Bay is near the mouth of the bay and occurs during the summer months. During this time harvest will be complete and the grow lines will have been removed. The proposed farm is compatible with fish and wildlife resources in the area, and does not adversely impact seabird colonies, sea lion haul-outs and rookeries, seal haul-outs and pupping areas.

According to the ADFG Anadromous Waters Catalog (AWC), Windy Bay has two salmon streams in the back of the bay. These streams are on the Priority Stream List, which is composed of a subset of salmon streams found in AWC and are some of the largest producers of salmon in PWS and are included in the aerial survey program. These streams are not open to commercial fishing. The kelp farm would not be within 1000 feet of the mouth of either Windy Creek or the other unnamed salmon stream in Windy Bay. There is very limited sport fishing that occurs on the Pink salmon that return to these streams. Windy Bay is a traditional seine area and the main reason for this application amendment was to move the farm into closed fishing waters so as to not interfere with commercial salmon seining in the bay.

Windy Bay was historically the site of three different oyster mariculture operations beginning in the early 1990's. It was chosen then, because of good tidal exchange with maximum tides of 18', resulting in good flushing and circulation. The large tidal exchanges result in corresponding good oxygen and salinity levels. Also the presence of the salmon streams, Windy Bay appears to be very nutrient rich. The depth of the site at mean low water is approximately 50 feet. The nature of the bottom varies from sticky clay at the entrance, to mud in the back of the bay, with medium pebbles beneath the farm site. The bay is ice-free and has an orientation to the northwest. It is protected from the prevailing southeast storms, well known in this area. The bay has some exposure to the north, but the NW orientation protects it from the due north, winter winds.

Figure 1 – General Location Map – USGS
Name: Royal Ocean Kelp Co.
Waterbody: Windy Bay, Hawkins Island
Region: Prince William Sound, SC Alaska
Date: April [redacted] 2025



North

Cordova C-6 & Cordova C-5

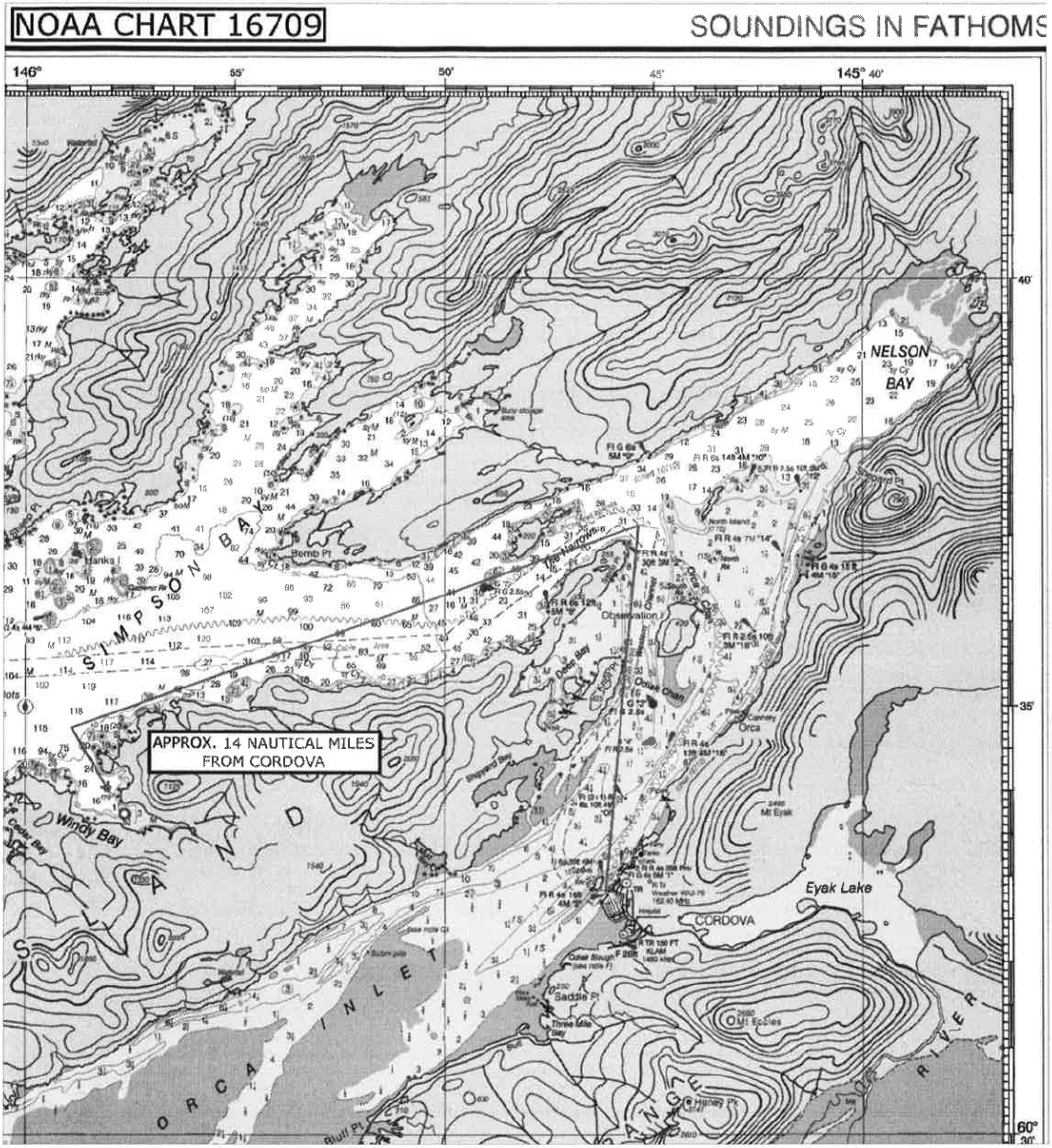
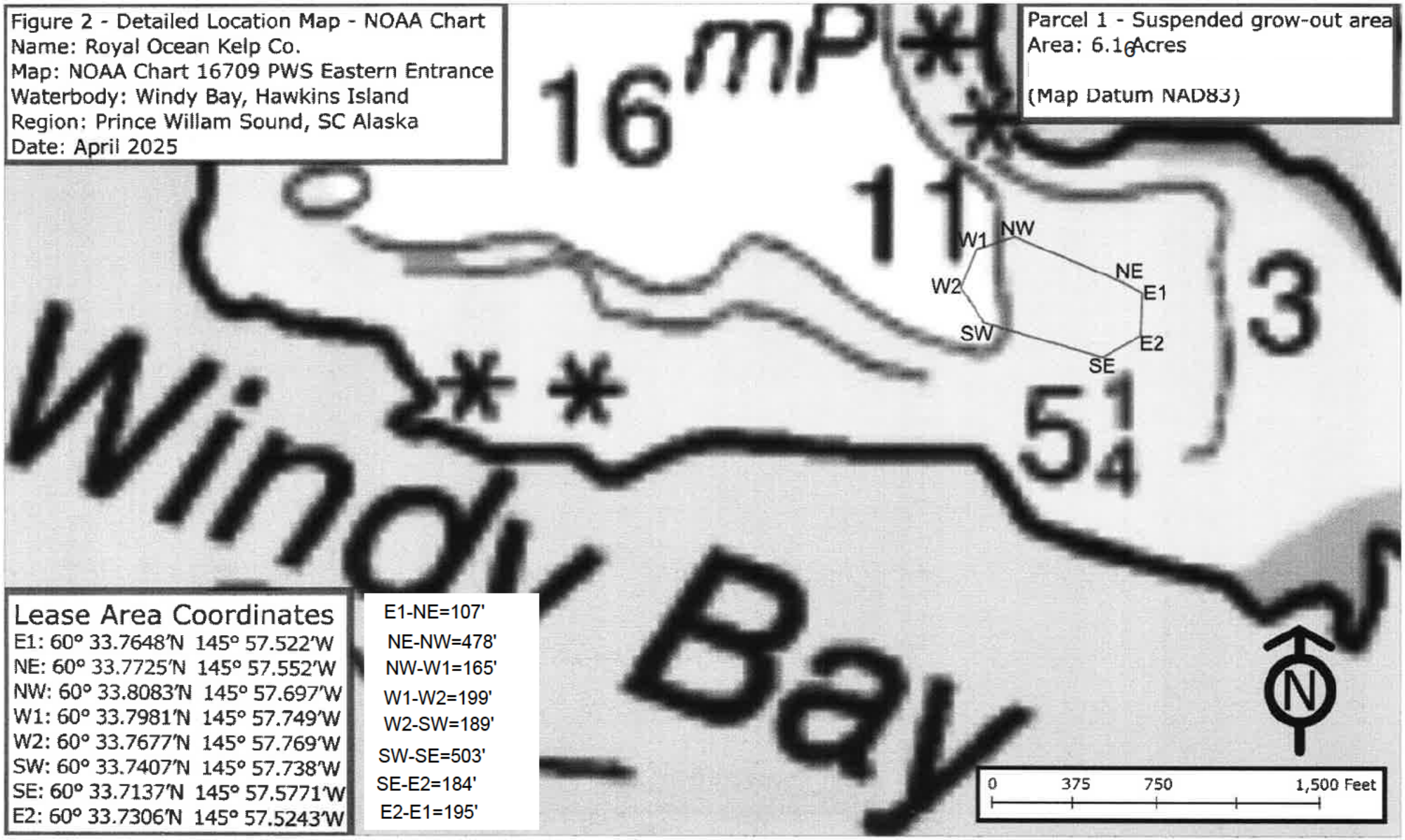

NOAA CHART 16709
SOUNDINGS IN FATHOMS
APPROX. 14 NAUTICAL MILES FROM CORDOVA
NELSON BAY
SIMPSON BAY
Bomb Pt
Observation I
Orca
Mt Eyak
Eyak Lake
CORDOVA
Saddle Pt
Windy Bay
ORCA INLET
Bluff Pt

Figure 2 - Detailed Location Map - NOAA Chart
Name: Royal Ocean Kelp Co.
Map: NOAA Chart 16709 PWS Eastern Entrance
Waterbody: Windy Bay, Hawkins Island
Region: Prince Willam Sound, SC Alaska
Date: April 2025



Lease Area Coordinates

E1: 60° 33.7648'N 145° 57.522'W
NE: 60° 33.7725'N 145° 57.552'W
NW: 60° 33.8083'N 145° 57.697'W
W1: 60° 33.7981'N 145° 57.749'W
W2: 60° 33.7677'N 145° 57.769'W
SW: 60° 33.7407'N 145° 57.738'W
SE: 60° 33.7137'N 145° 57.5771'W
E2: 60° 33.7306'N 145° 57.5243'W

E1-NE=107'
NE-NW=478'
NW-W1=165'
W1-W2=199'
W2-SW=189'
SW-SE=503'
SE-E2=184'
E2-E1=195'

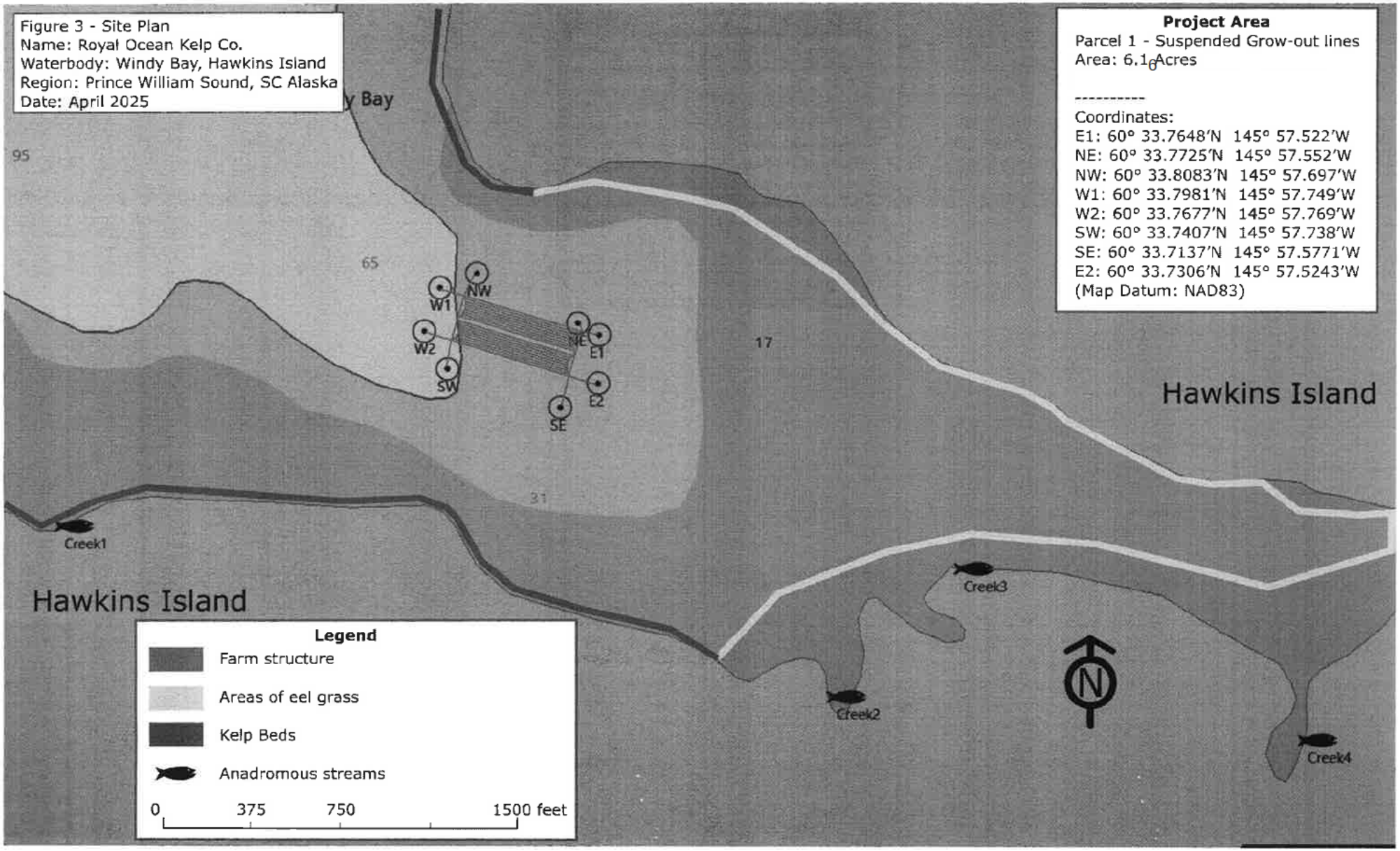
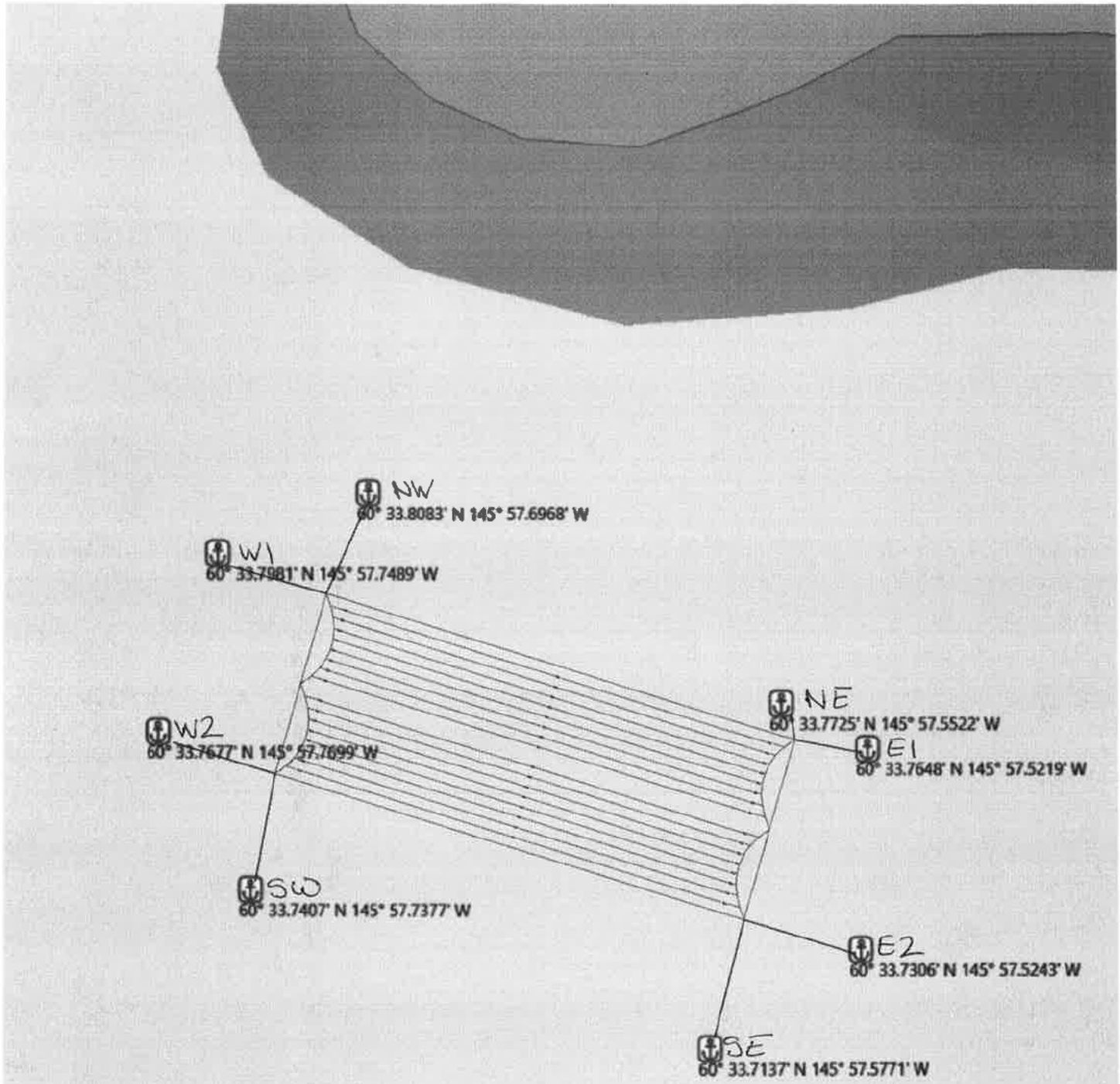


Figure 3 - Site Plan
Name: Royal Ocean Kelp Co.
Waterbody: Windy Bay, Hawkins Island
Region: Prince William Sound, SC Alaska
Date: April 2025
Project Area
Parcel 1 - Suspended Grow-out lines
Area: 6.1 Acres
Coordinates:
E1: 60° 33.7648'N 145° 57.522'W
NE: 60° 33.7725'N 145° 57.552'W
NW: 60° 33.8083'N 145° 57.697'W
W1: 60° 33.7981'N 145° 57.749'W
W2: 60° 33.7677'N 145° 57.769'W
SW: 60° 33.7407'N 145° 57.738'W
SE: 60° 33.7137'N 145° 57.5771'W
E2: 60° 33.7306'N 145° 57.5243'W
(Map Datum: NAD83)
Hawkins Island
Hawkins Island
Creek1
Creek2
Creek3
Creek4
NW
W1
W2
SW
SE
NE
E1
E2
95
65
17
31
N
Legend
Farm structure
Areas of eel grass
Kelp Beds
Anadromous streams
0 375 750 1500 feet

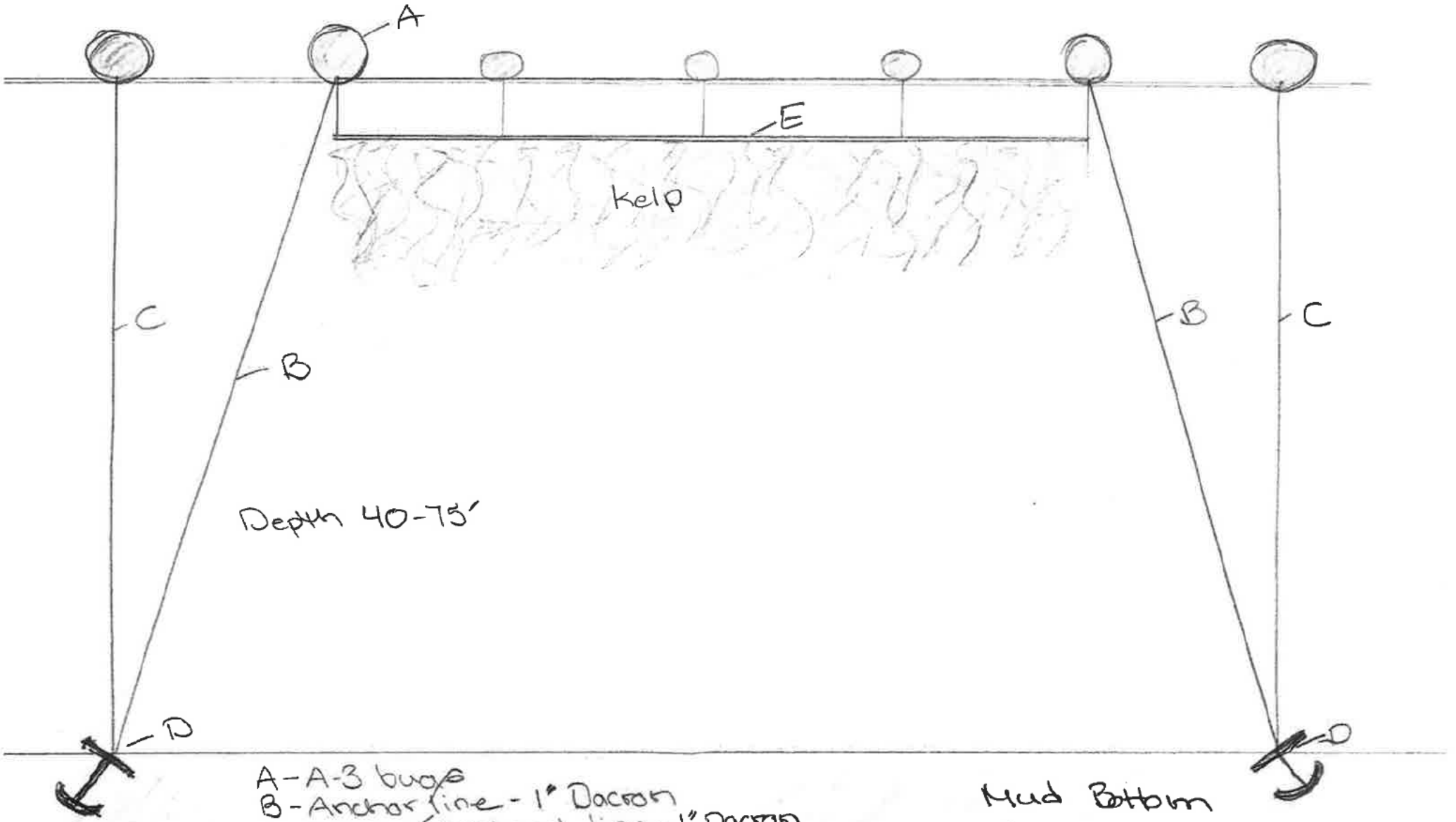


Site Plan Map - Extra Detail
Royal Ocean Kelp Co.
Windy Bay, Hawking Ig.
Prince William Sound, SC Alaska
April 2025

0 50 100 150 200 Feet

N

Royal Ocean Kelp Co. Cross-Sectional View
Windy Bay, AK
Hawkins Is. Prince William Sound
SC Alaska April 2025



A - A-3 buoys
B - Anchor line - 1" Dacron
C - Crowsy/retrieval line - 1" Dacron
D - 300 lb or 500 lb Danforth Anchors
E - 3/8" Growline Twisted poly