

Plan of Cooperation

Quintillion Subsea Operations Cable Project

Bering, Chukchi, and Beaufort Seas, Alaska

March 2016

Version 3.0

Prepared for

Quintillion Subsea Operations, LLC

201 E 56th Ave., Ste. 300

Anchorage, Alaska 99518

Prepared by



Owl Ridge Natural Resource Consultants
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Table of Contents

1. Introduction	1
2. Project Description	1
3. Statement of Notification	5
4. Operational Mitigation	5
5. Monitoring	5
6. Resolution and Mitigation.....	6
7. Community and Co-management Meetings	6
8. Contact Information	7

List of Figures

Figure 1 Quintillion Project	2
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List of Tables

Table 1: Meeting Representatives	6
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Appendices

Appendix A – Figures 2 through 6

Appendix B – Daily Report

Appendix C – Meeting Minutes

1. Introduction

Quintillion Subsea Operations, LLC (Quintillion), is proposing to install a subsea fiber optic network along the northern and western coasts of Alaska that will provide connectivity to six rural Alaskan communities by linking them with a terrestrial fiber optic line. A draft Plan of Cooperation (POC) was included with the Incidental Harassment Authorization (IHA) application on November 5, 2015 and was presented to the affected communities of Nome, Kotzebue, Pt. Hope, Wainwright, Barrow and Nuiqsut during meetings in February 2016. It was also discussed in a meeting with leadership from Nuiqsut during a meeting in Anchorage.

This revised POC includes the operational mitigations adopted by Quintillion as a result of the community meetings to prevent interruption of traditional uses of the area to the greatest extent possible during the 2016 cable laying operations. Quintillion continues to be committed to communicating and cooperating with local communities and co-management organizations through the life of the project. This POC was prepared specifically to address the following requirements:

- 50 CFR § 216.104 (a)(12), which requires a plan of cooperation to be submitted in support of a request for an Incidental Harassment Authorization (IHA) from the National Marine Fisheries Service (NMFS); and
- 50 CFR § 18.114, which requires a record of community consultation to be submitted in support of a request for an IHA from the U.S. Fish & Wildlife Service (USFWS).

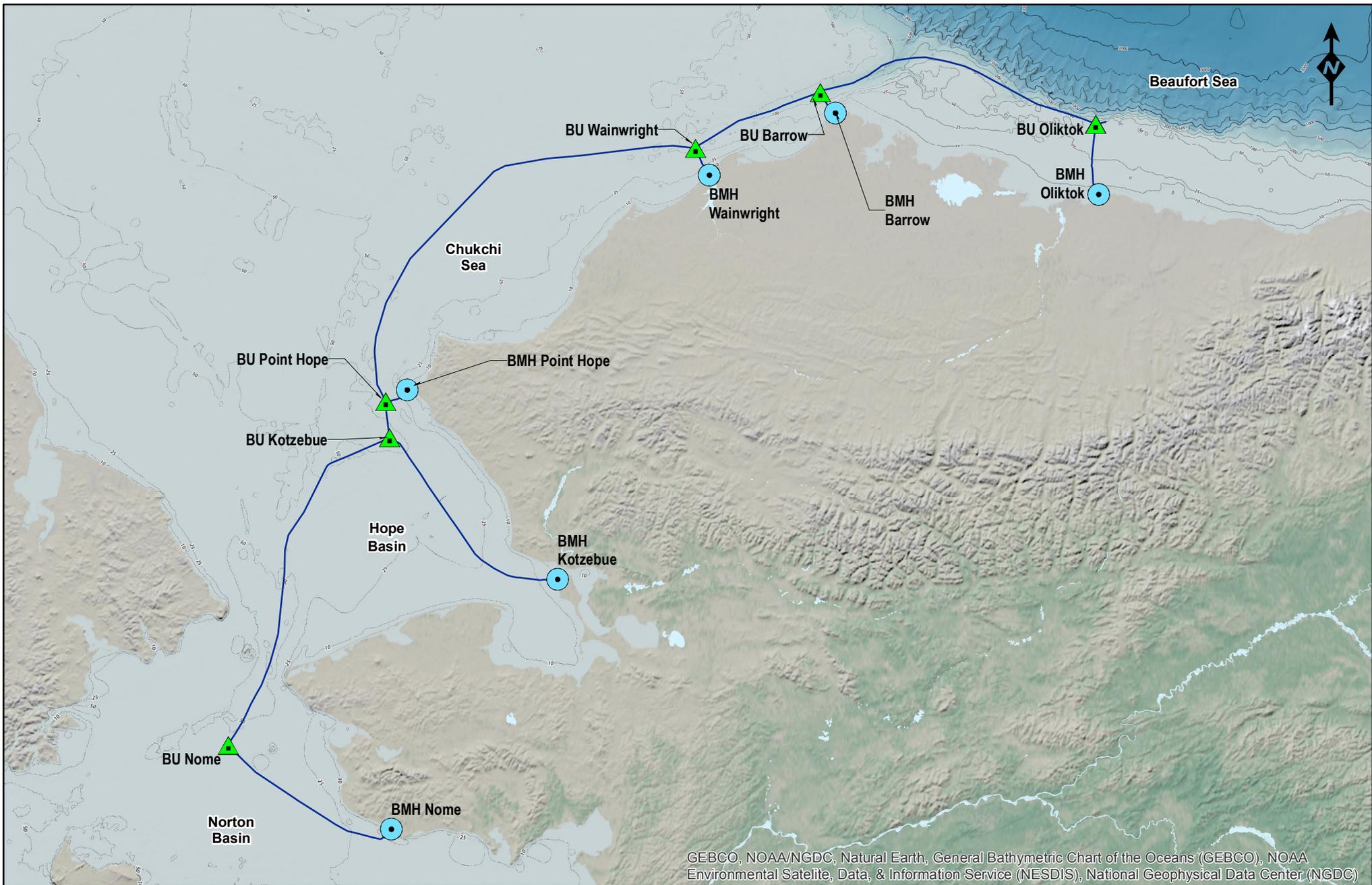
Quintillion's IHA applications describe the monitoring and mitigation procedures that will be implemented during the installation program to prevent conflicts with subsistence activities. This POC sets out procedures for Quintillion and contract staff to work in cooperation with the Chukchi, Bering and Beaufort Sea coastal communities through mutual sharing of information (project schedule, activity location/timing), with the objective of preventing conflicts between the installation program and subsistence hunting.

This POC also acts as a record of consultation as required by the USFWS and NMFS before issuance of an IHA to an applicant. Quintillion project staff has conducted several meetings in the coastal communities as well as with co-management groups. A summary of these meetings can be found in Section 5 of this document.

2. Project Description

The Quintillion Fiber Optic Project will consist of installing 1,904 km of submerged fiber optic cable that includes a main trunk line laid on the sea floor at a range of approximately 26 to 100 kilometers offshore; and six branching lines to onshore facilities in Nome, Kotzebue, Point Hope, Wainwright, Barrow, and Oliktok Point (Figure 1). The undersea cable installation will begin July 2016 at Nome and will continue until completion of the project in October 2016.

Laying of the cable offshore is planned to be conducted from cable laying vessels and nearshore cable laying by shallow draft barge and support spread. Installation of the branching lines, Branching Units (BU), and Beach Manholes (BMH) require onshore equipment and support, which is transported via a 32 ft runabout or a large 85 -125 ft landing craft to established landing sites at the villages. Each section of cable has unique characteristics such as armoring, burial, and anchoring; and it is loaded aboard the vessels in the order of installation.



GEBCO, NOAA/NGDC, Natural Earth, General Bathymetric Chart of the Oceans (GEBCO), NOAA Environmental Satellite, Data, & Information Service (NESDIS), National Geophysical Data Center (NGDC)

-  BMH
-  BU
-  Fiber Optic Lines



Projection: Alaska Albers

QUINTILLION SUBSEA LLC
Route Map



FIGURE:
1

3. Statement of Notification

Quintillion will submit copies of this revised POC to each of the affected communities and co-management groups listed in Table 1 and other interested stakeholders identified in the pre-operation meetings held in January and February.

4. Operational Mitigation

Installation of subsea cable is a slow methodical process with very prescriptive procedures that do not allow variation. Preventing disturbance of subsistence activities relies upon effective communication to local communities regarding vessel(s) location and speed of progress. Quintillion has adopted the following operational changes and mitigation measures to decrease the potential for disruption of subsistence activities. The following operating guidelines apply during Quintillion's activities in the Chukchi, Bering and Beaufort Seas, except as otherwise specified, and in all cases is subject to the flexibility needed to address environmental conditions and operational safety.

- Quintillion will use a total of three cable laying vessels to avoid scheduling commonality with whaling and subsistence activities.
- Cable laying will be done in segments strategically designed to avoid areas of active subsistence hunting to the greatest extent possible as seen in Figures 2 through 6 in Appendix A.
- Quintillion has contracted Alcatel-Lucent Submarine Networks to furnish and install the cable system. Alcatel-Lucent's vessels participate in the Automatic Identification System (AIS) vessel tracking system allowing the vessel to be tracked and located in real time.
- Quintillion has sponsored memberships for the Marine Exchange of Alaska (MEA) so that cable laying vessels and all other commercial vessels participating in the AIS vessel tracking system can be monitored in real time.
- Quintillion will distribute a daily report by email to all interested parties. Daily reports will include: vessel activity, location, subsistence/local information and any potential hazards. An example of the Daily Report can be found in Appendix B.
- Vessel speed is slow, less than 1 kt for barge operations, 0.25 kt during plowing operations, and 3-4 kt during surface laying.
- Quintillion project vessels will monitor marine VHF Channel 16 for local traffic and will use log books to assist in the standardization of record keeping.

5. Monitoring

Quintillion proposes to sponsor marine mammal monitoring during the cable installation in order to satisfy the anticipated monitoring and reporting requirements of the USFWS and NMFS IHAs. Each cable laying vessel will have on-board Protected Species Observers (PSO) during the operating season. The PSOs will be responsible for monitoring and documenting marine mammals and to communicate with subsistence hunters, if necessary.

Prior to mobilization, all PSOs will receive training on operations, monitoring protocols, data recording, and a marine mammal identification. An Observer's Handbook, adapted for the specifics of Quintillion's operation, will be prepared and distributed to all PSOs as preparation for the training and as a reference

document in the field. This Observer’s Handbook will be available to NMFS/USFWS or other stakeholders. All PSOs will meet the NMFS/USFWS requirements.

6. Resolution and Mitigation

Any disputes arising during or after Quintillion’s program will be resolved through direct communication between designated representatives and Quintillion. Proactive mitigation and reactive resolution may involve: consultation and information sharing, village visits and meetings, and operating protocols designed to reduce interference with subsistence activities.

7. Community and Co-management Meetings

Quintillion has been meeting with landing village communities and organizations for three years in preparation for the fiber optic cable laying project. In February 2016 meetings were conducted to present the plan of cooperation to those affected by the cable installation process. Table 1 below includes the communities and organizations that a representative of Quintillion has met with to discuss the project and address any comments or concerns. The community meetings included a presentation of the installation process and approximate schedule of activity. The presentations included all relevant information so the attendees could understand that the slow, methodical cable-laying process significantly reduces the potential for interaction or interference with traditional uses near the active cable installation areas.

TABLE 1: MEETING REPRESENTATIVES

Organization/Community	Date	Location
AEWC	October 19, 2015	Captain Cook Hotel, Anchorage, AK
AEWC	December 8, 2015	Anchorage, AK
Barrow Whaling Captains Association Board	January 19, 2016	Barrow, AK
Barrow Whaling Captains Association Members	January 25, 2016	Barrow, AK
AWEC	February 4, 2016	Barrow High School, Barrow, AK
Wainwright Community	February 8, 2016	Community Center, Wainwright, AK
Wainwright Whaling Captains	February 8, 2016	Olgoonik Camp, Wainwright, AK
Point Hope Community	February 9, 2016	Qalgi Community Center, Pt. Hope, AK
Tikigaq Whaling Captains	February 9, 2016	Restaurant, Pt. Hope, AK
City Management	February 10, 2016	NWAB Assembly Chambers Kotzebue, AK
Kotzebue Community	February 10, 2016	NWAB Assembly Chambers Kotzebue, AK
Maniilaq Association	February 10, 2016	Kotzebue, AK
Northwest Arctic Borough	February 10, 2016	NWAB, Kotzebue, AK
Kawerak Inc.	February 11, 2016	Nome, AK
Nome Community	February 11, 2016	Nome, AK
Kuukpik Corporation	February 25, 2016	Anchorage, AK

Additional matters that were identified by the stakeholders and addressed at the February meetings included:

- A beluga hunt in late July that coincides with the beluga migration from Icy Cape on to Wainwright,
- The June and July hunt for ooganuk and walrus,
- Commercial fishing that begins in July and goes until the third week in August in the Kotzebue Sound,
- The migration of white fish to the Colville Delta in June and July, and
- Seal hunting in the Colville Delta, out to Thetis Island that occurs in June and July.

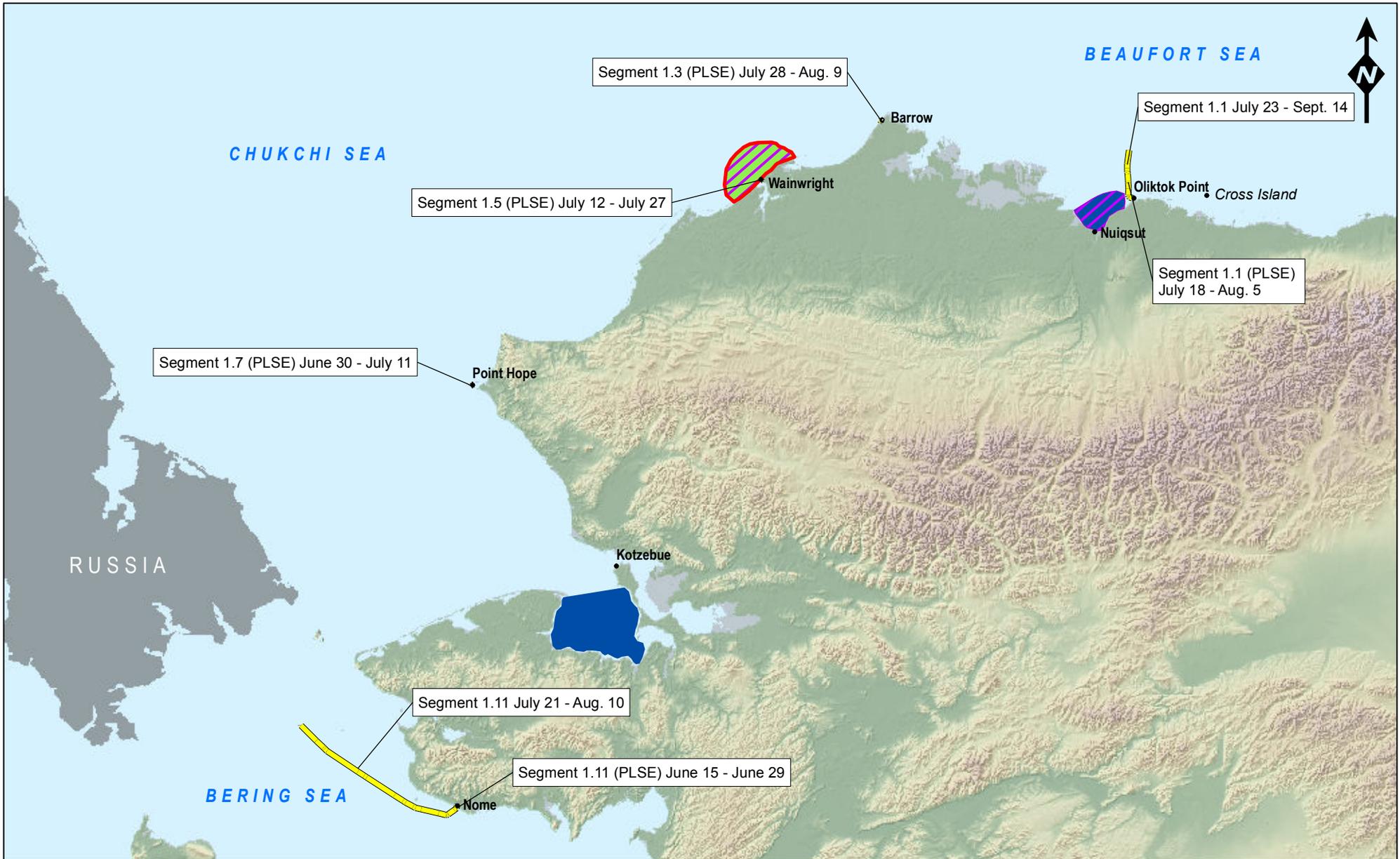
Each community and stakeholder expressed support of the project with hopes that installation would be completed on schedule. Commenters at the community meetings concurred that the mitigation measures and communication tools that Quintillion will be using will be sufficient to avoid interference with traditional uses. Quintillion explained to each community that despite best efforts there is still a small possibility of inconvenience for the villages at times during the cable laying process. Communities understand and accept this possibility with the knowledge that the project will result in improved communication and connectivity.

As opportunity arises meetings may be conducted with stakeholders during conferences, community meetings, and other course of business gatherings; currently there are no plans of additional organized meetings. Other communications that will continue throughout project execution may include: public service announcements on KBRW and KOTZ radio stations; messaging on the Alaska Rural Communications Service television network; and newsletters and 1-800 comment lines. At the end of the cable installation process Quintillion will conduct community meetings at the affected landing villages identified in this document for a final meeting to discuss and summarize project completion.

8. Contact Information

During operations, Quintillion will maintain an onshore presence and the contact information will be provided when available. Quintillion will set up a Toll Free 24-hour contact line to leave messages on issues at any time. If there are any questions regarding the POC please contact Quintillion at 1-800-673-4394 or info@Qexpressnet.com or our consultant, Glenn Ruckhaus, at 907-891-7265 or gruckhaus@owlridgenrc.com

APPENDIX A



BEAUFORT SEA

CHUKCHI SEA

BERING SEA

RUSSIA

Segment 1.3 (PLSE) July 28 - Aug. 9

Segment 1.5 (PLSE) July 12 - July 27

Segment 1.7 (PLSE) June 30 - July 11

Segment 1.11 July 21 - Aug. 10

Segment 1.11 (PLSE) June 15 - June 29

Segment 1.1 July 23 - Sept. 14

Segment 1.1 (PLSE) July 18 - Aug. 5

• Villages and Places of Interest

— Cable Lay Operations (Late June - July)

Subsistence Use By Type (July)

Beluga Whales

Seals

Fishing

Walrus

PLSE: Pre-laid Shore Ends

PLAN OF COOPERATION

LATE JUNE - JULY ACTIVITIES

Scale:

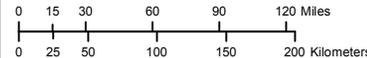
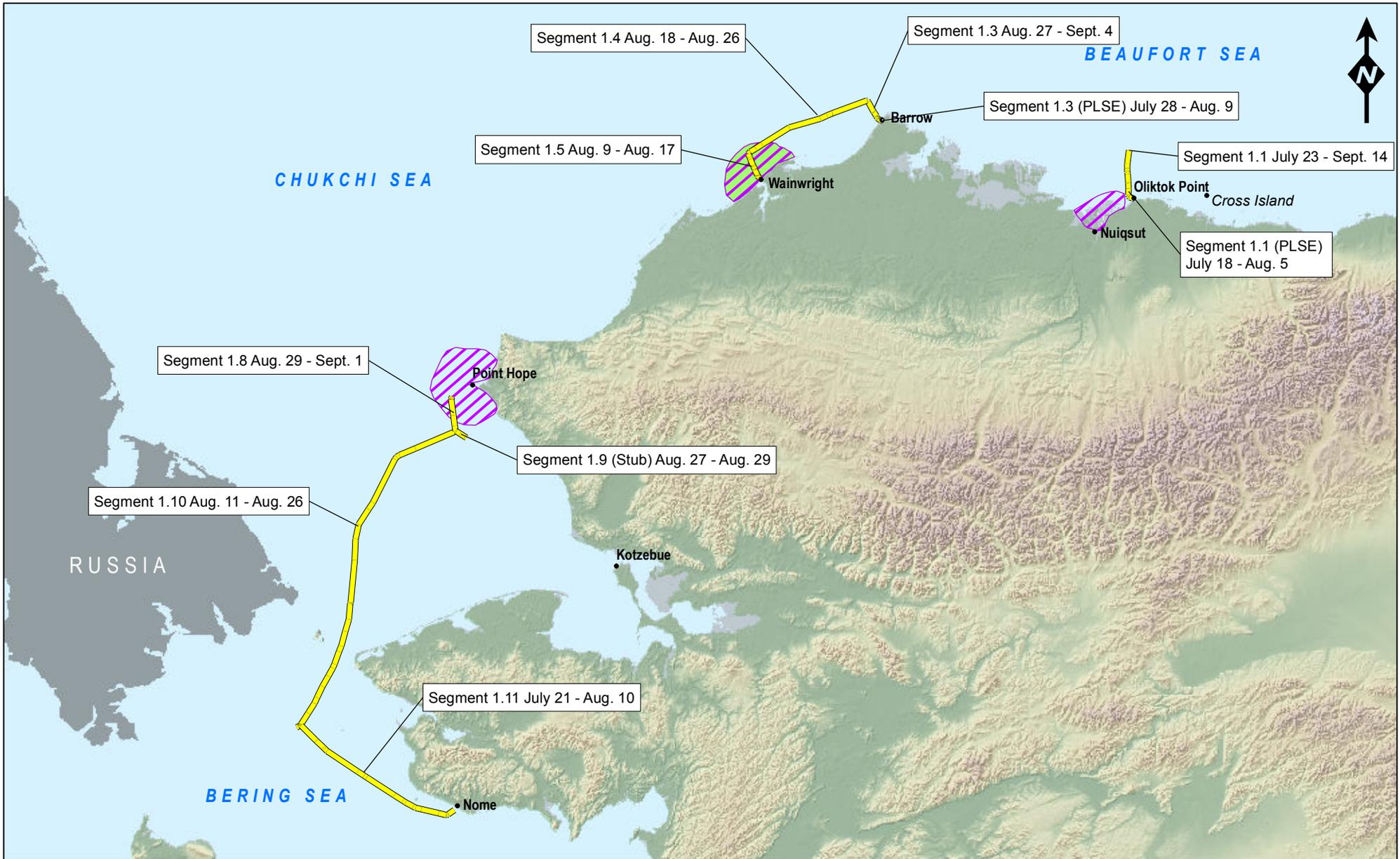


Figure:

2

PCS: Alaska Albers, NAD83



- Villages and Places of Interest
- Cable Lay Operations (August)
- ▨ Subsistence Use By Type (August)
 - ▨ Seals
 - ▨ Walrus

PLSE: Pre-laid Shore Ends

PLAN OF COOPERATION

AUGUST ACTIVITIES

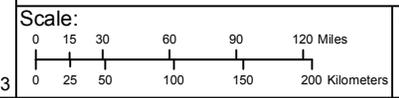
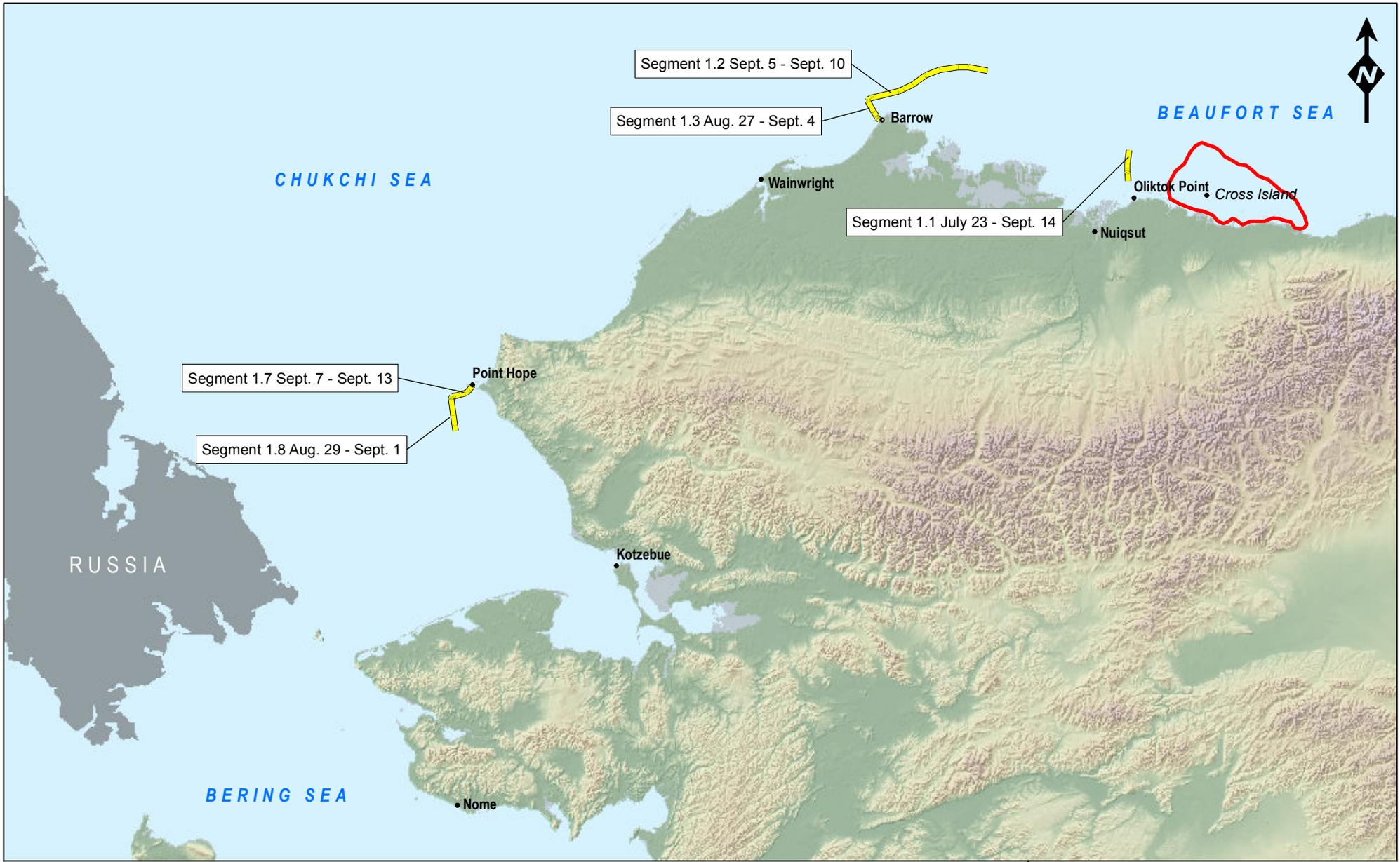


Figure: **3**

PCS: Alaska Albers, NAD83



- Villages and Places of Interest
- Subsistence Use By Type (Early September)
- Cable Lay Operations (September)
- ▭ Bowhead Whales

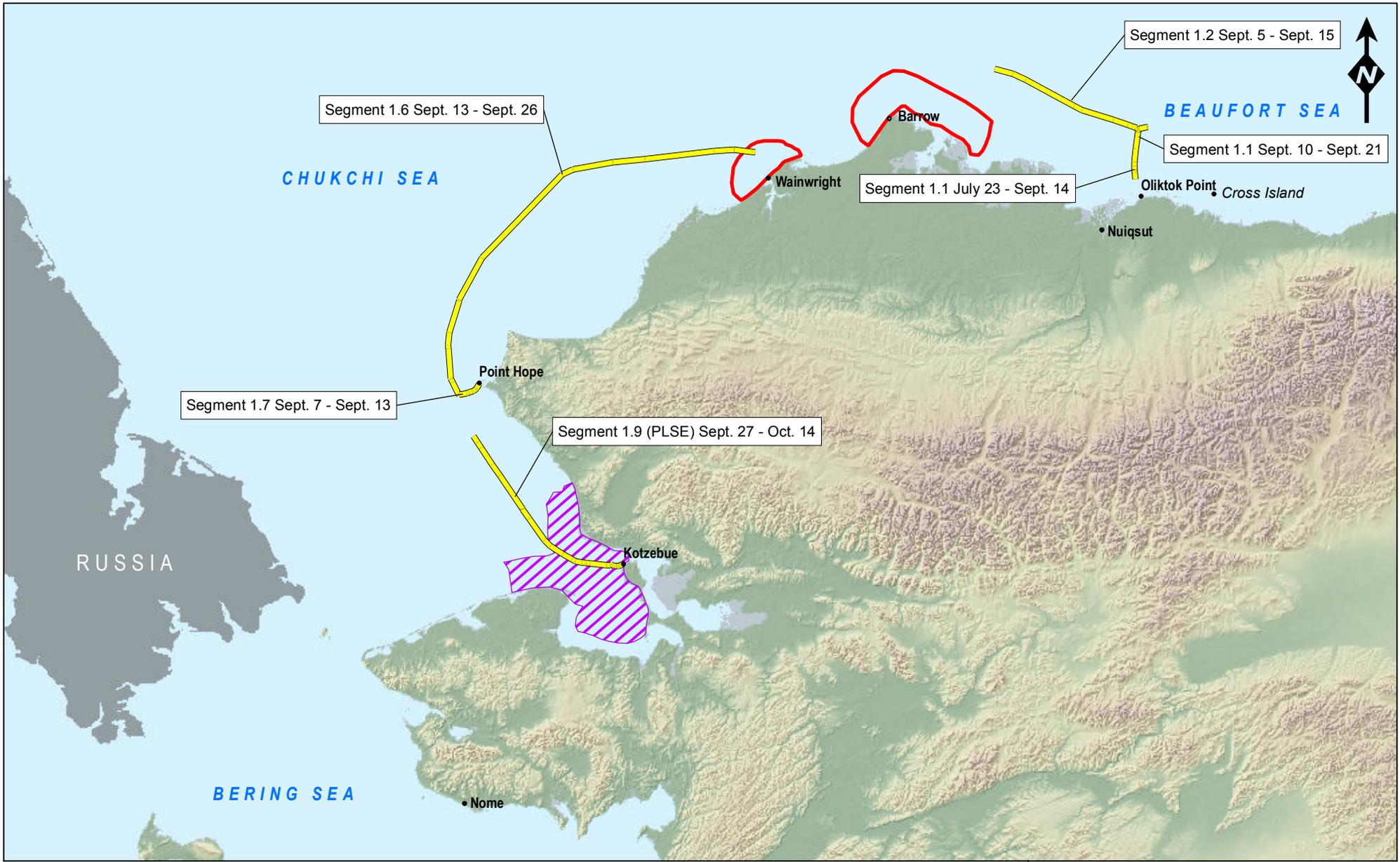
PLAN OF COOPERATION

EARLY SEPTEMBER ACTIVITIES

Scale: 0 15 30 60 90 120 Miles
0 25 50 100 150 200 Kilometers

Figure: **4**

PCS: Alaska Albers, NAD83



PLAN OF COOPERATION

LATE SEPTEMBER ACTIVITIES

- Villages and Places of Interest
 - Cable Lay Operations (September)
- Subsistence Use By Type (Late September)**
- Bowhead Whales
 - Seals

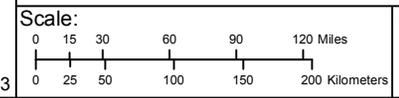
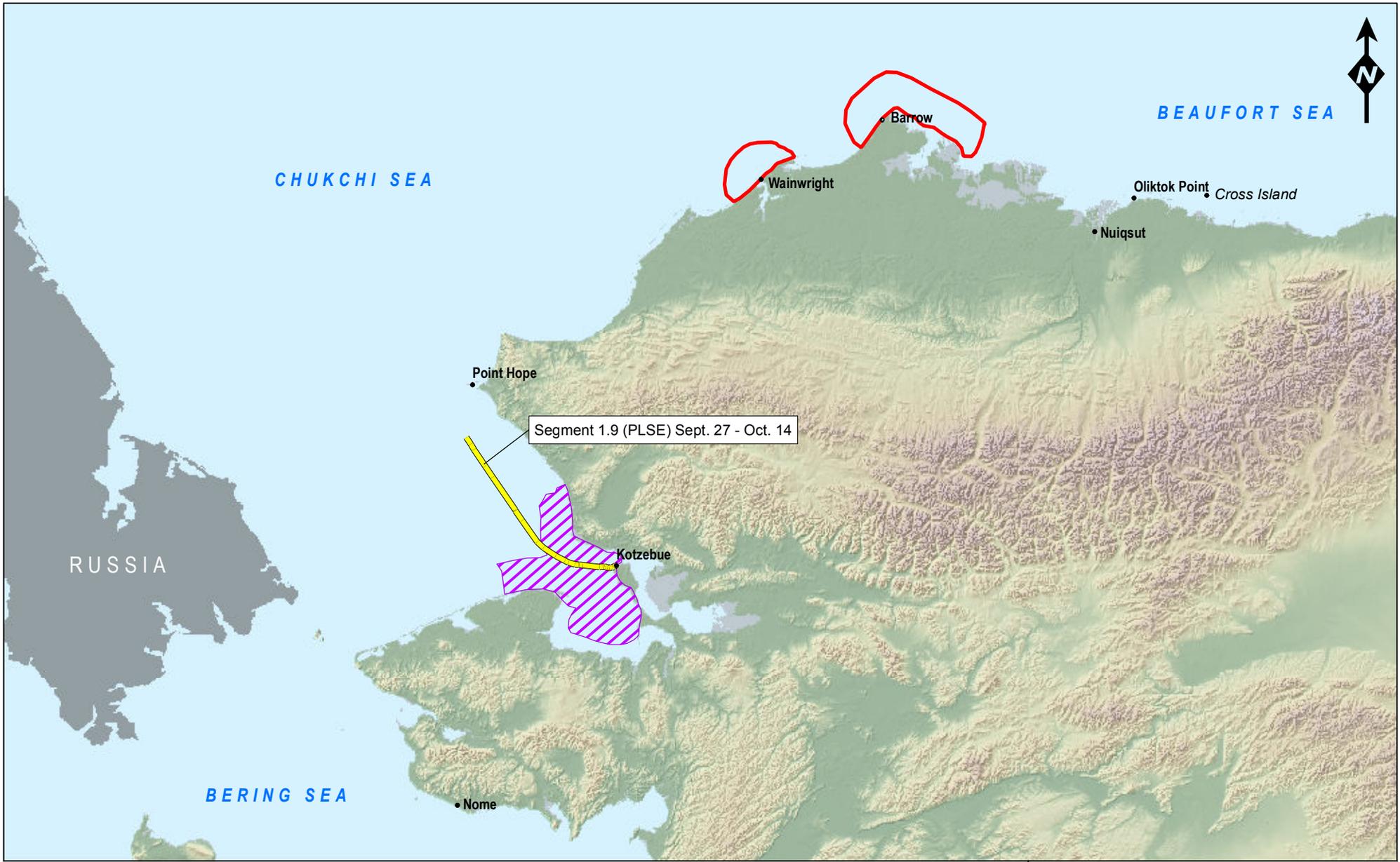


Figure: **5**

PLSE: Pre-laid Shore Ends

PCS: Alaska Albers, NAD83



- Villages and Places of Interest
- Cable Lay Operations (October)
- ▭ Subsistence Use By Type (October)
- ▭ Bowhead Whales
- ▨ Seals

PLSE: Pre-laid Shore Ends

PLAN OF COOPERATION

OCTOBER ACTIVITIES

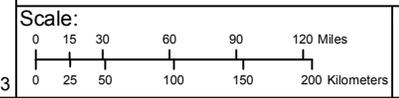


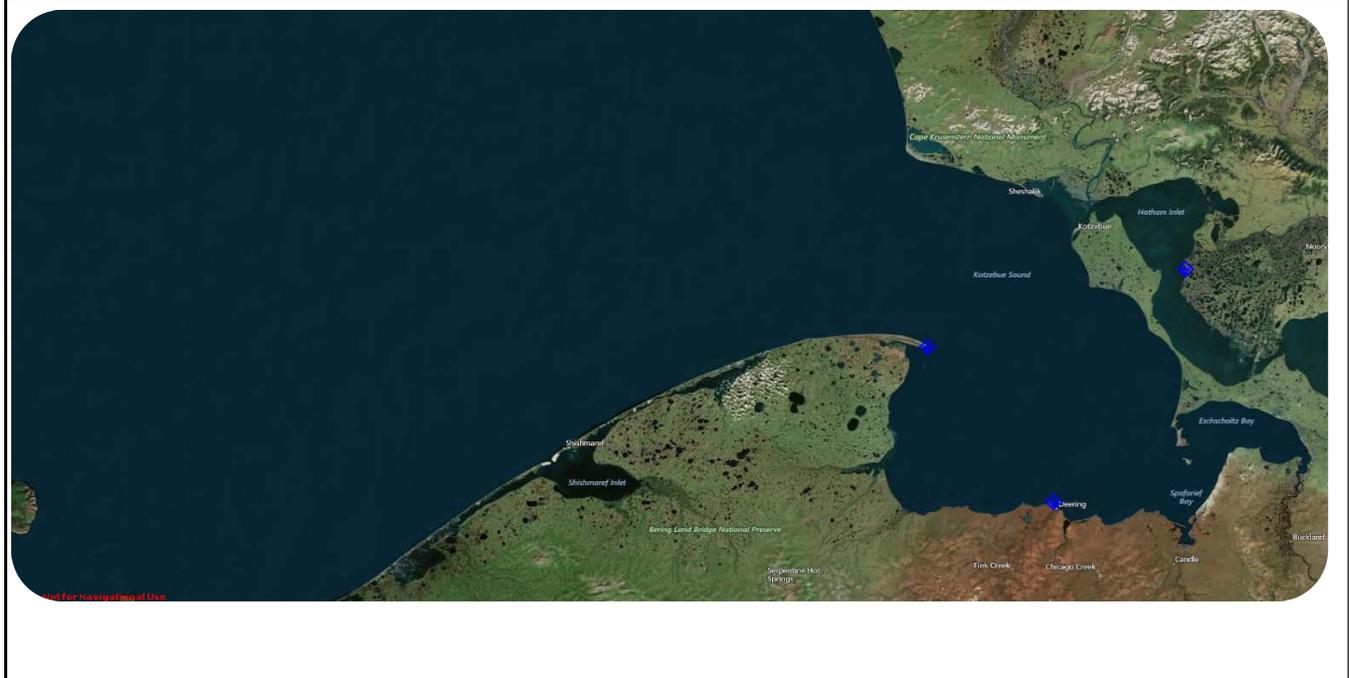
Figure: **6**

PCS: Alaska Albers, NAD83

APPENDIX B

QUINTILLION CABLE LAY PROJECT DAILY ACTIVITY REPORT

	REPORT DATE (DD/MM/YR):	REPORT TIME (24 HR):
--	-------------------------	----------------------

IL DE SEINE

VESSEL PROGRESS INFORMATION

VESSEL ACTIVITY	LOCATION			
	Latitude	Longitude	Vessel Course	Nearest Village

VESSEL PROGRESS -- REMARKS: Include unresolved issues / factors contributing to delays, communication and significant decisions.

SUBSISTENCE/ LOCAL INFORMATION
POTENTIAL HAZARDS
CONTACT INFORMATION

Activity Report Contact: Glenn Ruckhaus Email: glenn@owlridgenrc.com

APPENDIX C



Meeting Agenda and Minutes			
Client/Project	Quintillion	Date	October 19, 2015
Subject	Plan of Cooperation	Location:	Captain Cook Hotel, Anchorage
Attachments	AEWC Agenda – Quintillion Presentation		

Name	Representing	Name	Representing
Elizabeth Pierce	Quintillion - Presenter	AEWC Commissioners	AEWC
Edith Vordestrasse	Quintillion - Audience	Jessica Lefevre	AEWC – Legal Council
Glenn Ruckhaus	Owl Ridge	Interested Public	Various

Minutes –
<p>Quintillion was a small part of a two day agenda, they were asked to present to the AEW 3rd Quarter Commissioners meeting on their activity in the Chukchi and Beaufort Seas.</p> <ol style="list-style-type: none"> 1. Elizabeth Pierce was introduced by Harry Brower, president of AEW. 2. Presentation was shown and discussed to all in attendance. 3. Key Questions included: <ol style="list-style-type: none"> a. John Hopson – Wainwright – the village of Wainwright is anxious for this service to be provided. Quintillion should consider some sort of message to the community that the project is on track despite the Shell decision. b. Harry Brower – AEW President – requested clarification, he thought the project was a one time effort. Elizabeth answered that there is continuing activity in fall of 2015 to complete the geotechnical portions of the project. Also, next summer, a drilling rig will be barged to Barrow to drill the HDD for the near shore installation and connection to shore based facilities. c. Jessica Lefevre – asked if Quintillion would attend the February conflict avoidance meeting in Barrow. Elizabeth answered that they will follow the advice of Glenn Ruckhaus for the Plan of Cooperation. 4. <i>Off line discussions included:</i> <ol style="list-style-type: none"> a. BOEM director James Kendall requested discussion with Elizabeth at the completion of the meeting. b. Gay Sheffield with UAF-Nome (card attached) asked who was the Quintillion representative in Nome. Glenn explained that there currently are no village representatives. Information should be directed to the address on the presentation.

Action Items			
Item	Action	Responsible	Due Date
1	Prepare meeting minutes and letter to USCG describing details of the meetings and actions items.	Owl Ridge	9/4/15
2	USCG will responded to the letter (#1 listed above) to concur with permit process approach or recommend changes of the action items, schedule, and details.	USCG	9/11/15

Action Items			
Item	Action	Responsible	Due Date
3	Process as defined proceeds to resubmittal of application, completeness determination, and agreement of process forward.	USCG & City of Nenana with Owl Ridge	10/2/2015
4	Recommendation to Elizabeth if a communication to villages to verify the project remains active for 2016 installation is warranted	Sarah-Glenn	11/1/2015
5	Follow up on February CAA meeting timing and value to Quintillion	Glenn	11/1/2015
6			
7			
8			
9			
10			



ALASKA ESKIMO WHALING COMMISSION
P.O. Box 570 BARROW, ALASKA 99723

Third Quarterly AEWK Commissioners Meeting
Captain Cook – AFT Deck, Anchorage, Alaska
Monday, October 19, 2015
9:00 A.M. – 5:00 P.M.
AGENDA

- 9:00-9:15** **CALL TO ORDER**
ROLL CALL
INVOCATION
APPROVAL OF AGENDA
- 9:15-9:30** **APPROVAL OF MINUTES: 2nd Quarter Meeting Minutes**
- 9:30-9:45** **CHAIRMAN’S REPORT**
- 9:45-10:00** **EXECUTIVE DIRECTOR’S REPORT**
- 10:00-10:15** **BREAK**
- 10:15-10:30** **NOAA PRESENTATION (JENN HALL-BROWN)**
- 10:30-10:45** **OAK FOUNDATION (ANNE HENSHAW)**
- 10:45-11:00** **GRANT WRITERS REPORT**
- 11:00-11:30** **FINANCE DIRECTORS REPORT**
- 11:30-12:00** **ACCOUNTING POLICY AND PERSONNEL POLICY REVIEW**
- 12:00-1:30** **LUNCH**
- 1:30-2:15** **LEGAL REPORT**
- 2:15-2:45** **WIP VIDEO PRESENTATION**
- 2:45-3:00** **QUINTILLION**
- 3:00-3:30** **BREAK**
- 3:30-4:00** **USCG and AEWK Coordination: CDR James Houck**
- 4:00-4:15** **HILCORP: UPDATE ON LIBERTY PROJECT**

4:15-4:30	Peter Boveng PROPOSED AERIAL SURVEYS FOR SEALS AND POLARBEARS, AND DISCUSS WAYS TO PREVENT CONFLICTS WITH SPRING WHALING
4:30-4:45	CAROL FAIRFIELD - BOEM
4:45-5:00	WRAP UP
5:00	ADJOURN

ALASKA ESKIMO WHALING COMMISSION

P.O. Box 570 BARROW, ALASKA 99723

Third Quarterly AEWK Commissioners Meeting

Captain Cook – AFT Deck, Anchorage, Alaska

Tuesday, October 20, 2015

9:00 A.M. – 5:00 P.M.

AGENDA

- 9:00-9:15** **CALL TO ORDER**
ROLL CALL
INVOCATION
APPROVAL OF AGENDA
- 9:15-9:30** **BETH SPANGLER – ALASKA NATIVE SCIENCE & ENGINEERING PROGRAM (ANSEP)**
- 9:30-10:00** **TRIP REPORT FROM IWC ASW WORKING GROUP MTG JOHN HOPSON, JR.**
- 10:00-10:30** **IWC SCIENTIFIC COMMITTEE REPORT**
Dr. Craig George
- 10:30-11:30** **WEAPONS IMPROVEMENT PROGRAM**
- 11:30-12:00** **EXECUTIVE SESSION: INTERNAL REVIEW OF CAA**
- 12:00-1:30** **LUNCH**
- 1:30-3:30** **EXECUTIVE SESSION: COOPERATIVE AGREEMENT, MANAGEMENT PLAN, AND AEWK BYLAWS; CONFIDENTIALITY AGREEMENT**
- 3:30-3:45** **BREAK**
- 3:45-4:15** **NEW BUSINESS: ELECTIONS OF THE BOARD**
- 4:15-4:30** **OLD BUSINESS:**
- 4:30-5:00** **VILLAGE CONCERNS:**
- | | | | |
|----------|---------------|----------|------------|
| Kaktovik | Kivalina | Pt. Hope | Wainwright |
| Nuiqsut | Wales | Gambell | Savoonga |
| Barrow | Little Diomed | Pt. Lay | |

5:00-5:05 CORRESPONDENCE

**5:05-5:10 DETERMINE DATE, TIME, AND LOCATION OF 4TH
QUARTERLY AND MINI-CONVEDNTION**

5:10 ADJOURN

Quintillion Subsea Cable System Project Update

PRESENTED BY:

Elizabeth Pierce, Chief Executive Officer



ALASKA ESKIMO WHALING COMMISSION

Third Quarter Commissioners Meeting

Anchorage, Alaska

October 2015



About Quintillion

- Headquartered in Anchorage, Alaska
- Carrier for the local provider – we provide high speed “broadband” capacity to the local providers – ASTAC, ACS, GCI, etc.
- Managed by Elizabeth Pierce, CEO and Founding Partner
- Funded by US private investment group and select Alaska investors including Arctic Slope Regional Corporation (ASRC)



Purpose and Benefit to Community

High-speed Bandwidth stimulates community development:

- Enables extensions to connect more communities
- Carrier neutral: All telecoms can use the networks
- Substantially improve communication/Internet service while reducing costs
- Enables improvements in education, health care, public safety, search and rescue
- Stimulates economic growth

User Pays Business

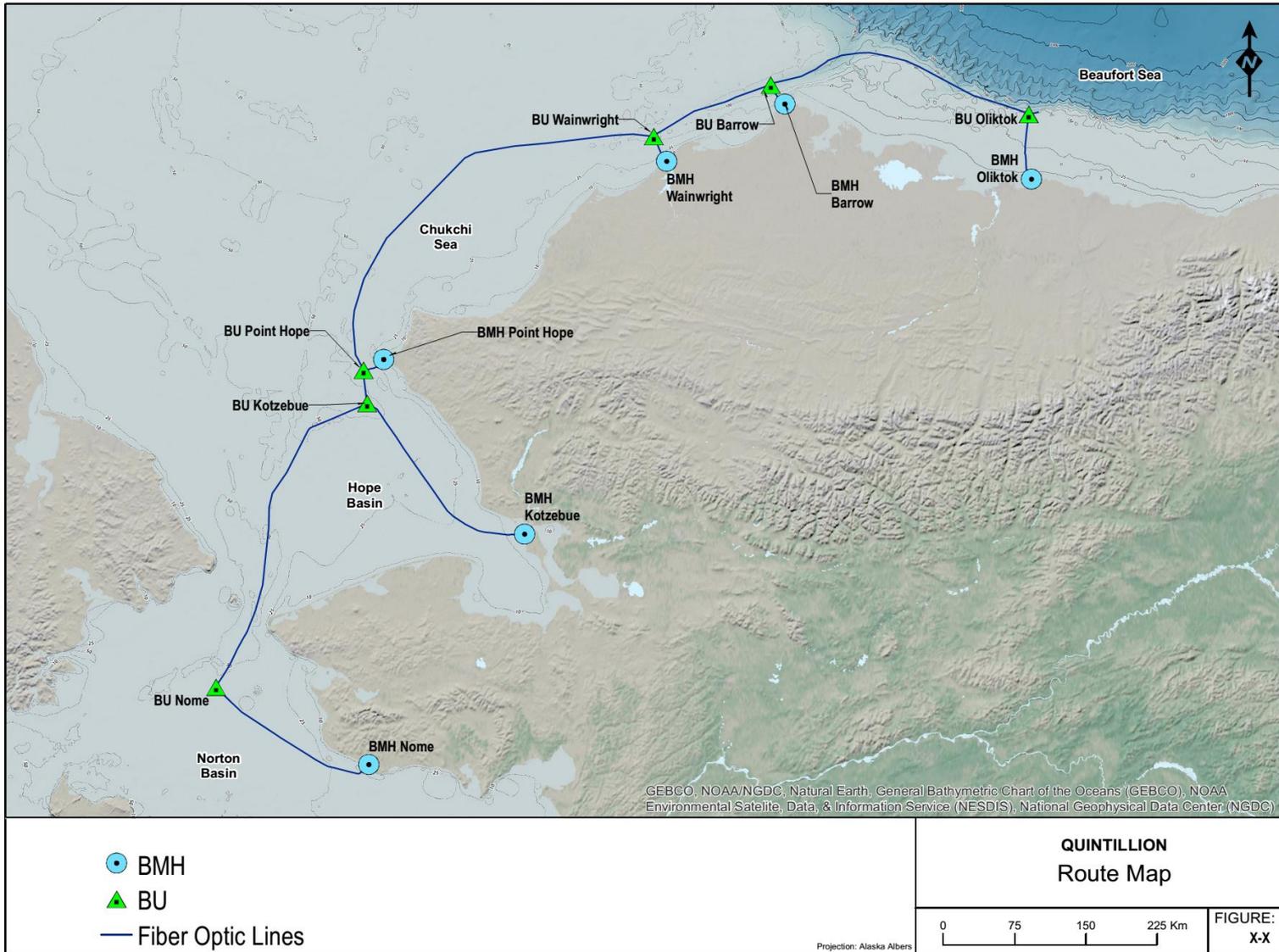
- All costs that go into delivering Broadband are passed on to the users at each landing

Short Term Activity for Long Term Benefit

- One summer to install
- No return work except for damage



Route Map – Phase I Alaska



2015 Project Work

- 1. Marine Survey:** confirms cable route and required burial depth
 - **Geophysical Survey:** map the sea floor using side scan and multi beam sonar
 - Completed July and August 2015
 - **Geotechnical Survey** analyze sea floor soil properties to design the cable burial plan
 - Ongoing through late October/early November
 - **Fugro**, subcontractor to Alcatel Submarine Networks, conducting Marine Survey work

- 2. Horizontal Directional Drilling:** install conduit in shallows near shore to protect cable
 - Drill from shore side with a surface drilling rig: up to 1 mile offshore
 - Bore drilled 60 – 80 feet deep below sea floor and steel casing installed for cable
 - Minimal impact on the surrounding area and shoreline

- 3. Cable Landing Stations:** work continues to install buildings and equipment



Why do we need to bury the cable?

- Human activities present the greatest risk to subsea cables
- In the Arctic, ice gouging presents a serious risk
- Cable must be protected by burying it in the sea floor in the shallow waters

Causes of service-impacting cable breaks	Percentage
Fish trawling	40%
Ship anchorages	28%
Subsea earthquakes or subsidence	8%
Shunt (electrical faults) failures	8%
Amplifier or branching unit failure	4%
Abrasion (wave, seabed, ice)	3%
Other factors, sabotage, etc.	9%
Total	100%

*International Submarine Cable Protection Committee, 2013



2016 Summer Activities: Cable Installation

Details on the cable lay are still being finalized

- Cable laying vessel details to be determined
- Final route of cable to be confirmed
- Target cable lay late June through early September

System Builder: Alcatel Submarine Networks

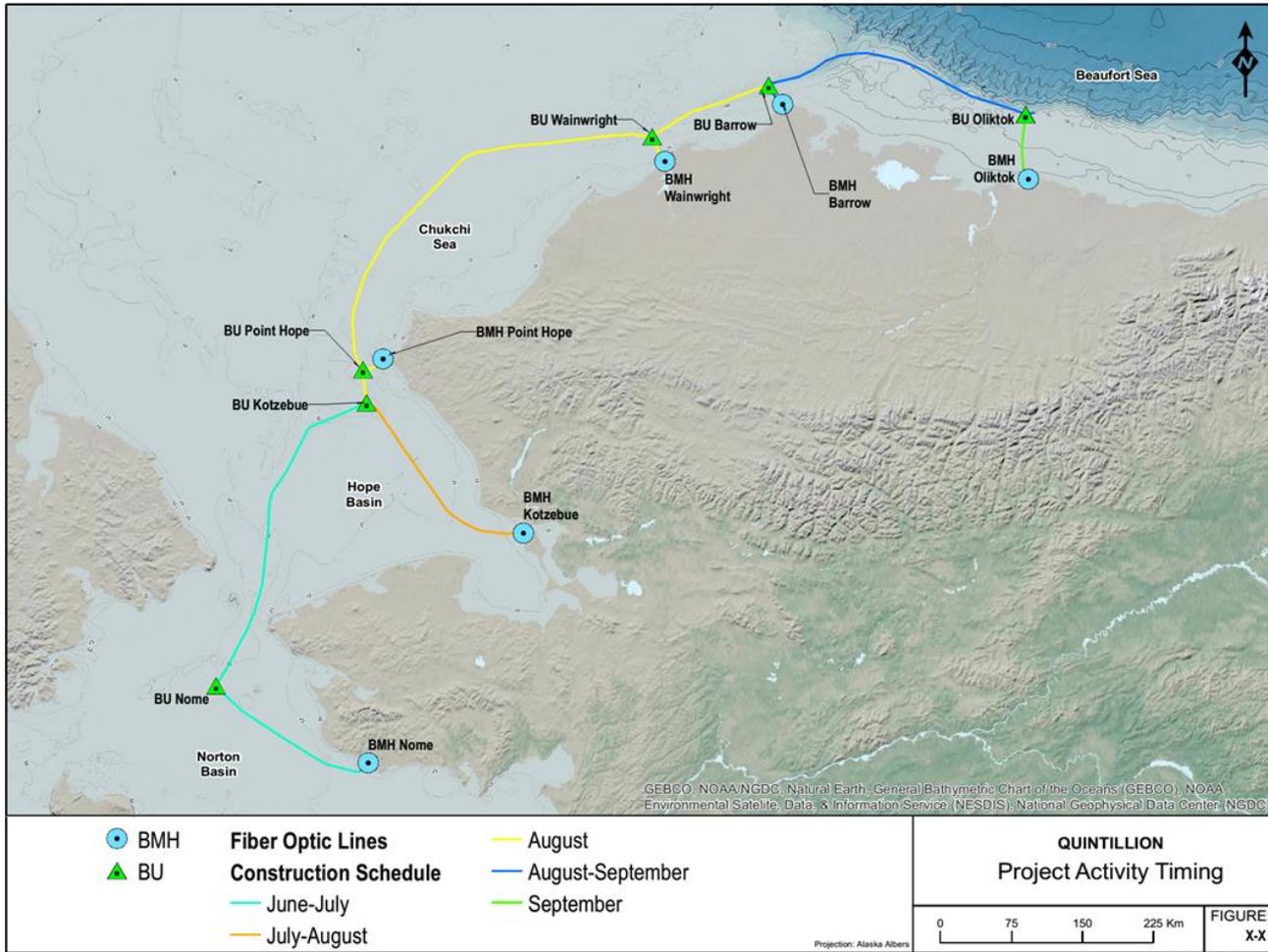
- A leading global supplier of subsea cable systems
- Progress is slow and steady
- Systematic process to be successfully installed
- Must be conducted as a continuous operation

Coordinating our Plan of Cooperation

- Glenn Ruckhaus at Owl Ridge is leading our planning efforts
- Community information meetings starting in March/April 2016



Preliminary 2016 Summer Schedule



IHA and Plan of Cooperation

Quintillion has applied for an IHA

- Cable laying vessel details to be determined

Plan of Cooperation

- Gathering input from Whaling Captains
- Early and frequent communication

Coordinating our Plan of Cooperation

- Glenn Ruckhaus at Owl Ridge is leading our planning efforts
- Community information meetings will be scheduled in 2016



MMO onboard marine survey vessel



For more information

Please contact Quintillion for more information

info@Qexpressnet.com

Quintillion Subsea Operations
201 East 56th Avenue, Suite 300
Anchorage, Alaska 99518



QUYANAQPAK





Gay Sheffield
Marine Advisory Agent — Bering Strait

gay.sheffield@alaska.edu
(907) 443-2397

Alaska Sea Grant Marine Advisory Program
400 East Front Street
Nome, AK 99762
Fax (907) 443-5602

www.marineadvisory.org



Alaska Sea Grant supports coastal communities through research, education, and extension, and is funded by the University of Alaska Fairbanks and the National Oceanic and Atmospheric Administration with support from Alaska partners.

The **Alaska Sea Grant Marine Advisory Program (MAP)** is a statewide outreach and technical assistance program helping Alaskans sustain economic development, traditional cultural uses, and conservation of marine and coastal resources.



Meeting Agenda and Minutes			
Client/Project	Quintillion	Date	December 8, 2015
Subject	Plan of Cooperation	Location:	Sheraton Hotel, Anchorage
Attachments	Quintillion Presentation		

Attendees			
Name	Representing	Name	Representing
Elizabeth Pierce	Quintillion - Presenter	AEWC Commissioners	AEWC
Edith Vordestrasse	Quintillion - Audience	Jessica Lefevre	AEWC – Legal Council
Glenn Ruckhaus	Owl Ridge	Interested Public	Various

Minutes –
<p>Elizabeth Pierce presented the Plan of Cooperation presentation to the Attendees.</p> <ul style="list-style-type: none"> • Comments received – <ul style="list-style-type: none"> ○ Quintillion should present this presentation at the Barrow Whaling Captains meeting

Quintillion Subsea Cable System Project Update

PRESENTED BY:

Elizabeth Pierce, Chief Executive Officer



ALASKA ESKIMO WHALING COMMISSION
Fourth Quarter Commissioners Meeting
Anchorage, Alaska
December 2015

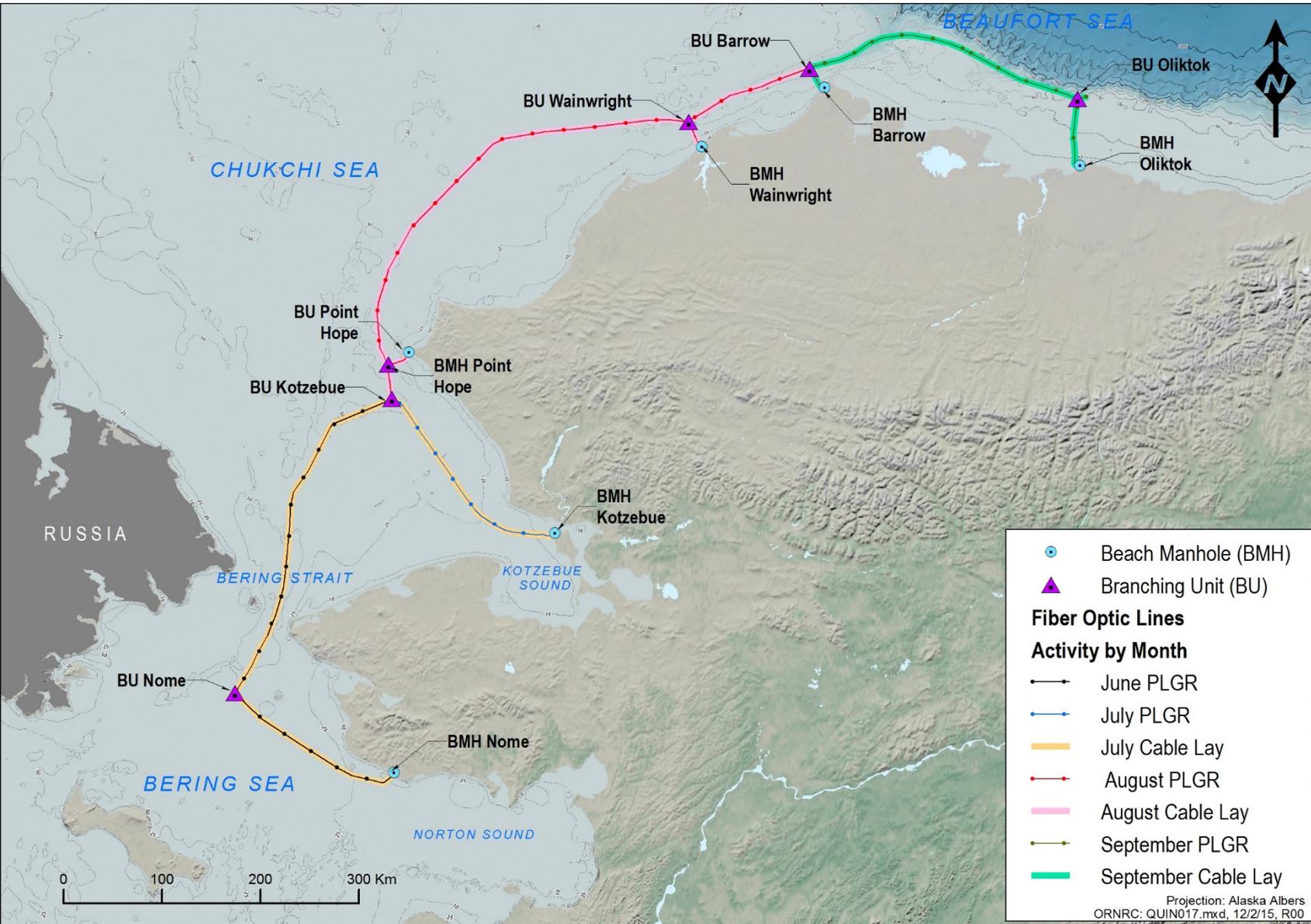


Review of September Presentation

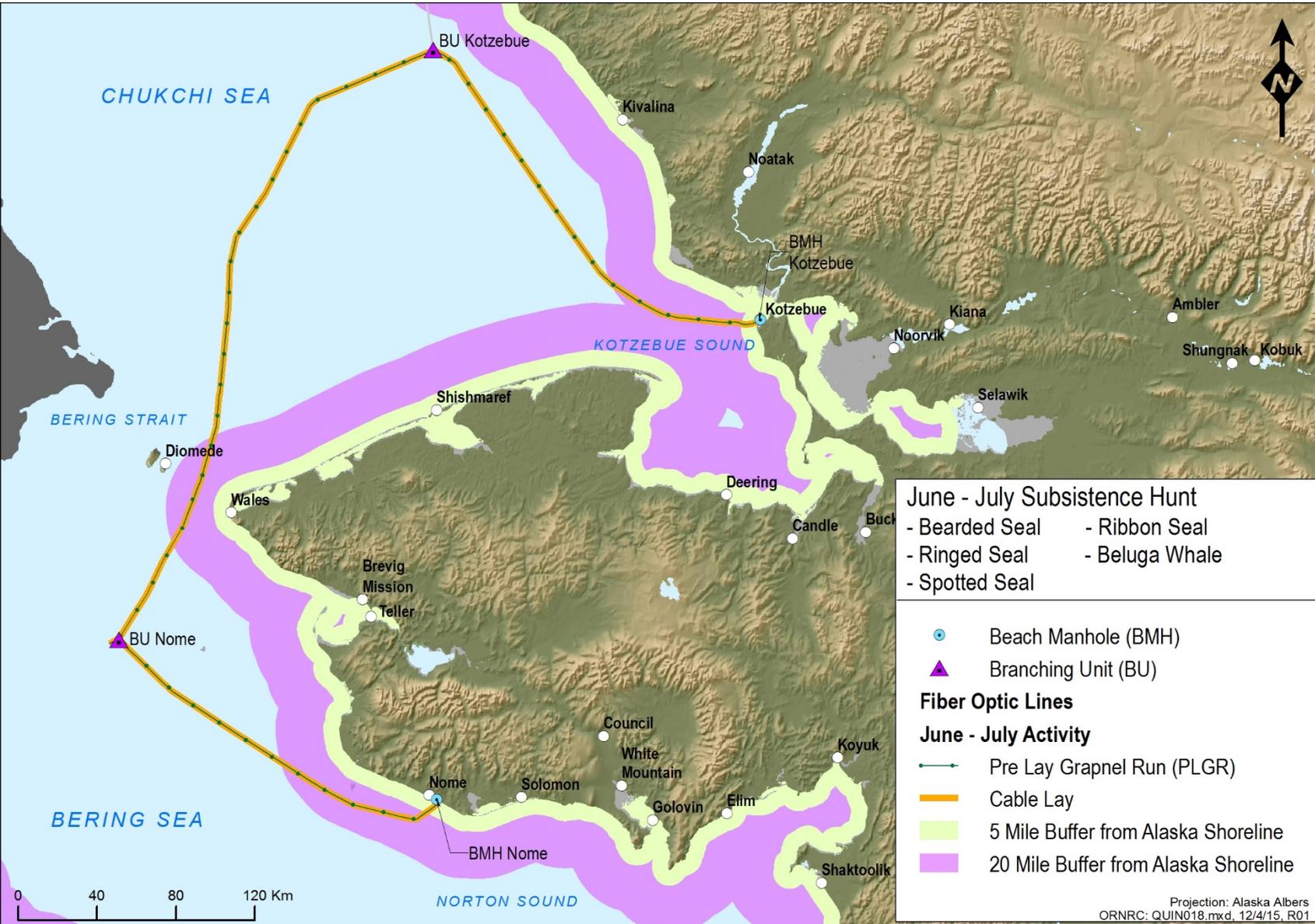
- Headquartered in Anchorage, Alaska
- Carrier for the local provider – we provide high speed “broadband” capacity to the local providers.
- Funded by US private investment group and select Alaska investors
- User-Paid Business
 - All costs that go into delivering broadband are passed on to the users
- Short Term Activity for Long Term Benefit
 - One summer to install
 - No return work except in the event of damage
- Cable lay cannot stop or slow down once begun
 - Ship moves very slowly, less than 15 kilometers per day
- Communication is our only form of mitigation to subsistence activities
 - We want to focus our efforts and discussions on how to effectively share information and communicate.



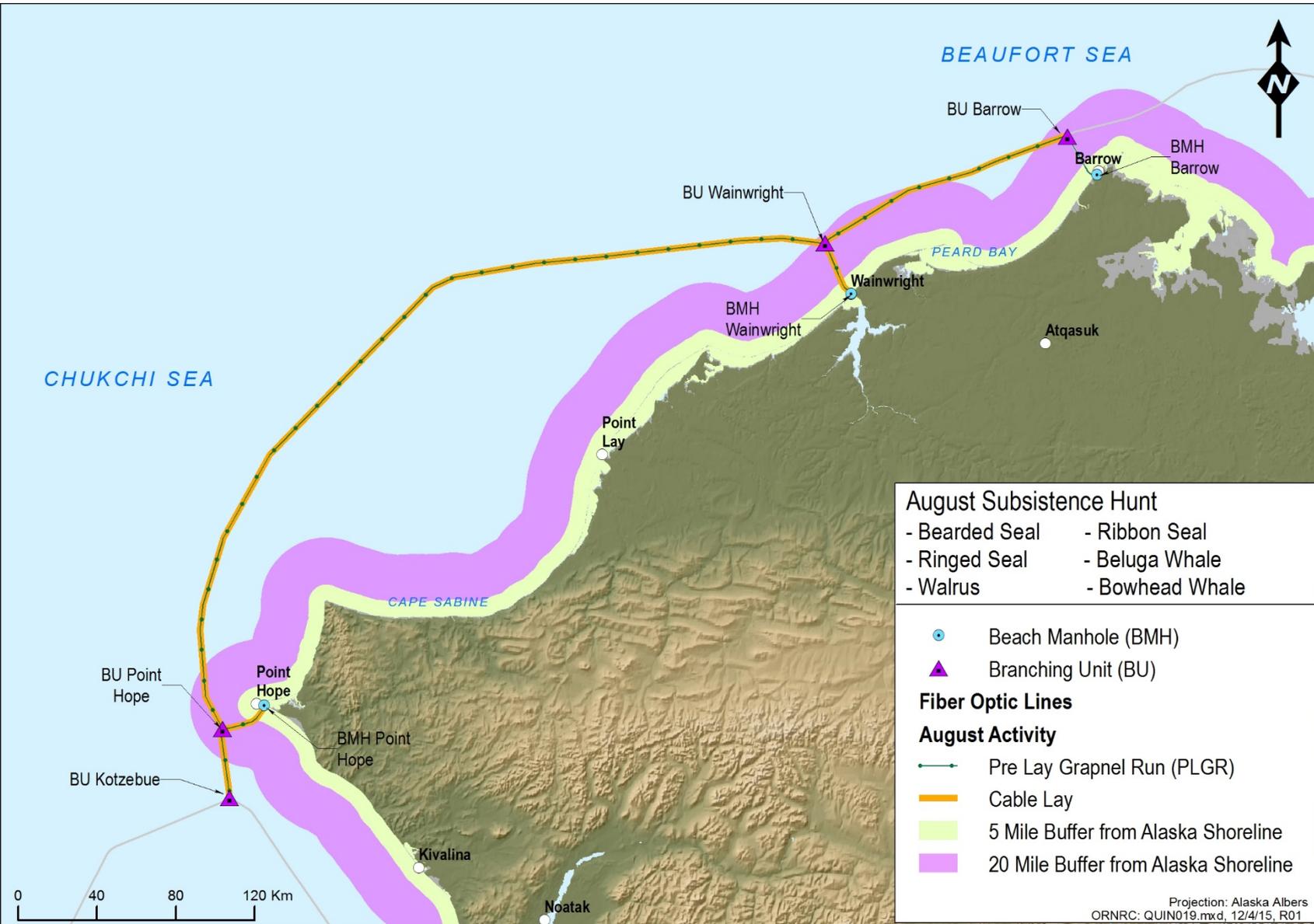
Preliminary 2016 Summer Schedule



June and July 2016 Activity



August 2016 Activity



August Subsistence Hunt

- Bearded Seal
- Ringed Seal
- Walrus
- Ribbon Seal
- Beluga Whale
- Bowhead Whale

● Beach Manhole (BMH)
▲ Branching Unit (BU)

Fiber Optic Lines

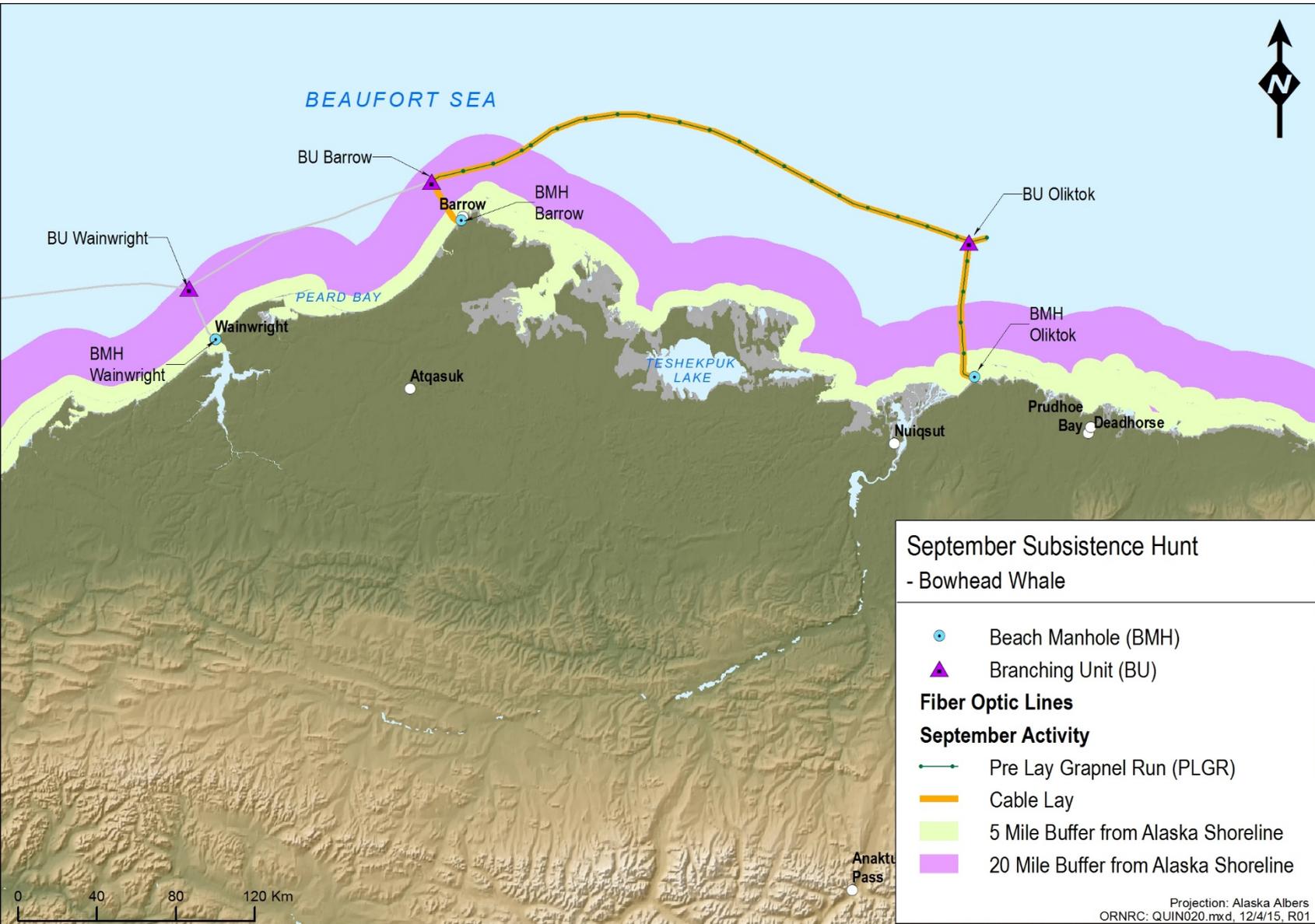
August Activity

- Pre Lay Grapnel Run (PLGR)
- Cable Lay
- 5 Mile Buffer from Alaska Shoreline
- 20 Mile Buffer from Alaska Shoreline

Projection: Alaska Albers
ORNR: QUIN019.mxd, 12/4/15, R01



September 2016 Activity



Information Sharing Prior to Start

- Newsletters and Mailings
- Television and Public Radio Announcements
- Will attend all land village meetings to which we are invited
- Conduct Plan of Cooperation Meetings at all landing villages in 2016

Quintillion Subsea Fiber Project



Thank you 

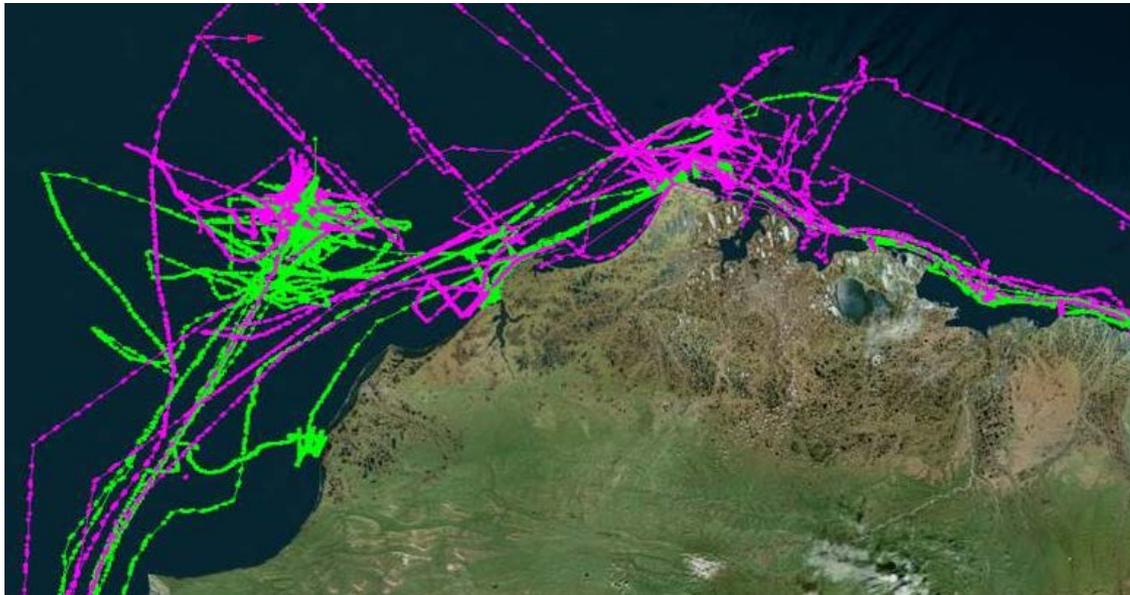
We would like to thank the residents, and city and tribal governments of the landing communities of Barrow, Wainwright, Pt Hope, Kotzebue and Nome. We also appreciate the important work of all our contractors including New Horizons Telecom, Umiq, Alcatel Submarine Networks, and RT Casey for their safe and successful work this season.

We are on schedule to deliver broadband service to the landing communities in 2017.



Information Sharing During Operations

- Television and Public Radio Announcements
- Regular Ship to Shore Communication with the Landing Villages and AEWC on progress and schedule updates
 - Updates provided a minimum of every 24 hours
- Provide Membership to AEWC to Alaska Marine Exchange
 - Allows 24/7 Access to location of all commercial vessels



For more information

Please contact Quintillion for more information

info@Qexpressnet.com

Quintillion Subsea Operations, LLC
201 East 56th Avenue, Suite 300
Anchorage, Alaska 99518





Meeting Minutes			
Location:	Barrow, Alaska	Date	January 19, 2016
Subject	Barrow Whaling Captain Assoc. Board Meeting	Call-in #	N/A
Attachments	Presentation		

Attendees					
Name	Company	Present	Name	Company	Present
Glenn Ruckhaus	Owl Ridge NRC	X	Eugene Brower	BWCA	X
Crawford Patkotak	BWCA	X	Jake Adams	BWCA	X
Tommy Nageak	BWCA	X	Edward ?	BWCA	
Charlie Hopson	BWCA	X			
Joe Leavitt	BWCA	X			

Meeting
<p>I. Presentation provided in hard copy (Attached)</p> <ul style="list-style-type: none"> • Communication is the primary mitigation available to Quintillion – • AEWC will have membership to Alaska Marine Exchange and can track all commercial vessels 24/7 <p>II. Key Issues Identified by BWCA Board</p> <ol style="list-style-type: none"> a. Maps should show the distance from shore b. Be explicit on speed of vessels c. Size – How big is the cable laying vessel? d. Provide a comparison of cable laying to Seismic – What is the difference in level of sound and speed of travel e. Provide Schedule updates f. Start as early as possible and try to be out of the area before whaling begins in mid-September <p>III. Requests from Board</p> <ol style="list-style-type: none"> a. Board recommends to attend the full membership meeting on January 25 and have presentation that addresses issues above. Would be best if Elizabeth Pierce the CEO of Quintillion could attend, if not a video introduction would suffice. b. Become a true partner with whalers, communication and understanding of activities. c. Field Discounts into accounts <p>IV. Communication</p> <ul style="list-style-type: none"> • Crawford Patkotak as secretary of the BWCA is the point of contact for communication.

Quintillion Subsea Cable System



BARROW WHALING CAPTAINS ASSOCIATION

Barrow, Alaska

January 2016



About Quintillion

- Headquartered in Anchorage, Alaska
- Carrier for the local provider – we provide high speed “broadband” capacity to the local providers.
- Managed by Elizabeth Pierce, CEO and Founding Partner
- Funded by US private investment group and select Alaska investors including Arctic Slope Regional Corporation (ASRC)



Purpose and Benefit to Community

High-speed Bandwidth stimulates community development:

- Enables extensions to connect more communities
- Carrier neutral: All telecoms can use the networks
- Substantially improve communication/Internet service while reducing costs
- Enables improvements in education, health care, public safety, search and rescue
- Stimulates economic growth

User Pays Business

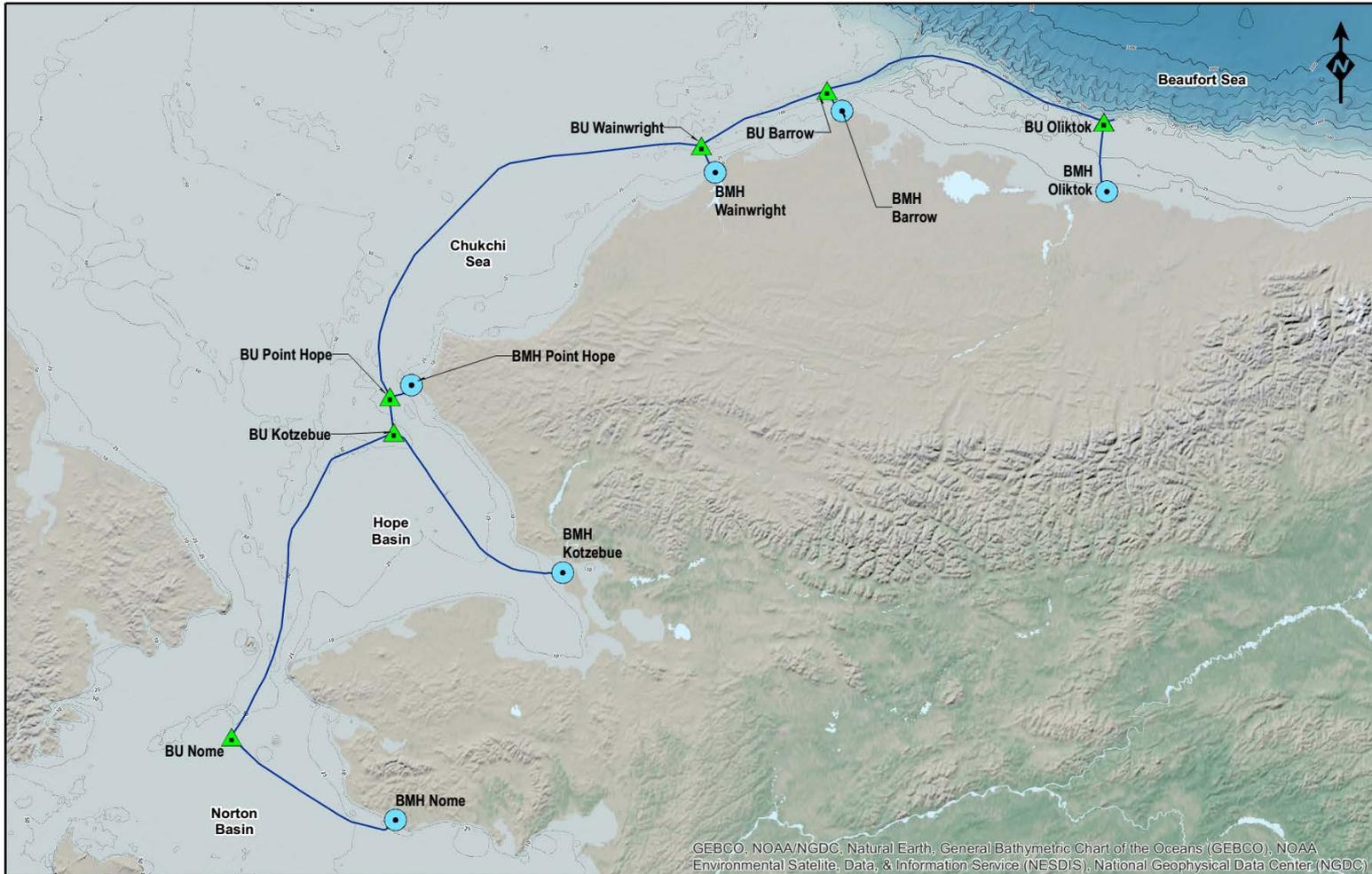
- All costs that go into delivering Broadband are passed on to the users

Short Term Activity for Long Term Benefit

- One summer to install
- No return work except for damage



Route Map – Phase I Alaska



GEBCO, NOAA/NGDC, Natural Earth, General Bathymetric Chart of the Oceans (GEBCO), NOAA Environmental Satellite, Data, & Information Service (NESDIS), National Geophysical Data Center (NGDC)

<ul style="list-style-type: none"> ● BMH ▲ BU — Fiber Optic Lines 	<p>Projection: Alaska Albers</p>
---	----------------------------------

<p>QUINTILLION Route Map</p>	
<p>0 75 150 225 Km</p>	<p>FIGURE: X-X</p>



2015 Project Work Completed

- 1. Marine Survey:** confirms cable route and required burial depth
 - **Geophysical Survey:** map the sea floor using side scan and multi beam sonar
 - **Geotechnical Survey** analyze sea floor soil properties to design the cable burial plan
- 2. Horizontal Directional Drilling:** install conduit in shallows near shore to protect cable
 - Drill from shoreside with a surface drilling rig: up to 1 mile offshore
 - Completed: Nome, Kotzebue, and Wainwright
 - Bore drilled 60 – 80 feet deep below sea floor and steel casing installed for cable
 - Minimal impact on the surrounding area and shoreline
- 3. Cable Landing Stations:** work continues to install buildings and equipment



Why do we need to bury the cable?

- Human activities present the greatest risk to subsea cables
- In the Arctic, ice gouging presents a serious risk
- Cable must be protected by burying it in the sea floor in the shallow waters

Causes of service-impacting cable breaks	Percentage
Fish trawling	40%
Ship anchorages	28%
Subsea earthquakes or subsidence	8%
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Amplifier or branching unit failure	4%
Abrasion (wave, seabed, ice)	3%
Other factors, sabotage, etc.	9%
Total	100%

*International Submarine Cable Protection Committee, 2013



2016 Summer Activities: Cable Installation

Complete HDD

- Barrow
- Point Hope
- Oliktok

Details on the cable lay are still being finalized

- Cable laying vessel details to be determined
- Final route of cable to be confirmed
- Target cable lay late June through early September

System Builder: Alcatel Submarine Networks

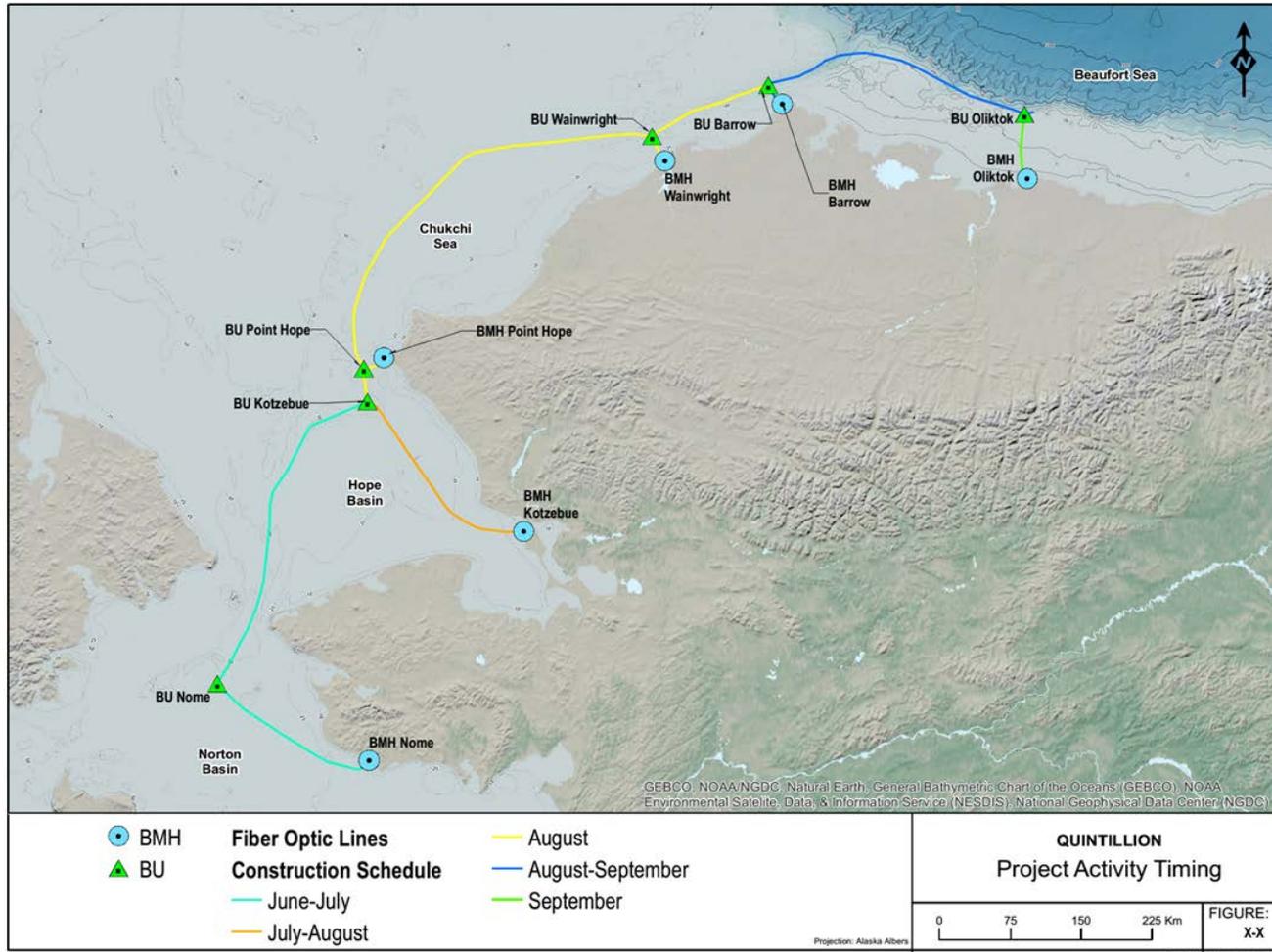
- A leading global supplier of subsea cable systems
- Progress is slow and steady
- Continuous systematic process to install

Coordinating our Plan of Cooperation

- Meetings start in January 2016 with this meeting
- AEWG Min Convention February 1-4
- Landing Communities in February



Preliminary 2016 Summer Schedule



IHA and Plan of Cooperation

Quintillion has applied for an IHA

- Integrating data from summer program and obtaining vessel data
- Assessing potential to add another vessel
- 4MP Developed
- Peer Review Meeting slated for early March

Plan of Cooperation

- Gathering input from Whaling Captains
- Quintillion will donate membership to the Alaska MEarly and frequent communication

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- Glenn Ruckhaus at Owl Ridge is leading our planning efforts
- Community information meetings whaling captains will be scheduled in 2016



Information Sharing

- Newsletters and Mailings
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Quintillion Subsea Fiber Project

Quintillion Fiber Optic Installation Progress

Thank you **Q** QUINTILLION

We would like to thank the residents, and city and tribal governments of the landing communities of Barrow, Wainwright, Pt Hope, Kotzebue and Nome. We also appreciate the important work of all our contractors including New Horizons Telecom, Umiag, Alcatel Submarine Networks, and RT Casey for their safe and successful work this season.

We are on schedule to deliver broadband service to the landing communities in 2017.



For more information

Please contact Quintillion for more information

info@Qexpressnet.com

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201 East 56th Avenue, Suite 300
Anchorage, Alaska 99518

Or

Glenn Ruckhaus

glenn@owlridenrc.com

907-891-7265



Meeting Minutes					
Location:	Barrow, Alaska		Date	January 25, 2016	
Subject	Barrow Whaling Captain Assoc.		Call-in #	N/A	
Attachments	Presentation				
Attendees					
Name	Company	Present	Name	Company	Present
Glenn Ruckhaus	Owl Ridge NRC	X	Eugene Brower	President -BWCA	X
Crawford Patkotak	Secretary - BWCA	X	Full Membership - approximately 50 present		X
Tommy Nageak	Board BWCA	X	Robert Suydam,	NSB Wildlife	X
Charlie Hopson	Board BWCA	X			
Joe Leavitt	Board BWCA	X			

Minutes
<p>Meeting began with invocation and call for prayers for Jake Adams and Edward Itta, both could not be present with health concerns.</p> <p>These minutes provided only related to the Quintillion project. Numerous other discussion occurred along with a presentation from Dr. Suydam with the NSB Wildlife on revised population estimates of the bowhead.</p> <p>Apology provided to membership from Elizabeth Pierce that she could not present in person to the BWCA. Elizabeth will be in Barrow for the AEWC mini convention on February 4-5, and will happy to meet with anyone during that time.</p> <p>Presentation provided in hard copy (Attached) and discussed</p> <ul style="list-style-type: none"> • Communication is the primary mitigation available to Quintillion – • AEWC will have membership to Alaska Marine Exchange and can track all commercial vessels 24/7 <p>Most of the questions were related to when high speed internet will be available in Barrow and at what cost?</p> <p>Many focused on Slide 4 wanting to know if their costs would be down to \$30 per month. It was emphasized that the slide is only a representation of their current costs shown on the GCI website and what other communities in the lower 48 with broadband pay for service. Final consumer costs will depend upon the cost to install, user pay system.</p> <p><u>Specific Questions and Answers:</u></p> <ol style="list-style-type: none"> 1. How loud is the noise from the ship and plowing and whether the plowing was a significant sound source? <ol style="list-style-type: none"> a. It was explained that the cable lay vessel is a dynamic positioning vessel and the noise is from propulsion and thrusters. Plowing is a significantly lower sound level than the propulsion and is masked by the noise from propulsion and thrusters. 2. Walrus dive deep and feed from bottom, are we sure that there will not be any impacts to cable from walrus feeding?

Minutes

- a. Answer: the cable has significant armouring with steel and HDPE to prevent damage from numerous potential incident. This specific question has not been asked previously and we will verify the armouring is sufficient to withstand the effects of bottom feeding walrus.
- b.
- 3. Are you applying for an IHA?
 - a. Yes the application was submitted in October 2015 and is in process.
- 4. Will Quintillion sign the CAA?
 - a. No, as there are shut down provisions in the CAA which Quintillion cannot agree too. As explained in the presentation, the installation must be continuous, breaking off is possible but will require abandoning the project in 2016 and potential long delay to return and repair. Requires continuous operation.

One whaler made the comment to the Board and president of the AEWFC of whether BWCA was going to allow the precedent to be set that cable laying does not need to have a CAA. He felt this sets a bad precedent. The answer from the president was that the AEWFC cannot force any operator to sign the CAA. In this particular case, the operation is significantly offshore and beyond their typical whaling grounds. They do not have any examples of activities that occur that far offshore and it is unknown whether the whales will be deflected from the cable lay activity. While whales typically deflect away from noise, they can also be curious and may be attracted. This is an unknown.

Final comments from BWCA were that they support the project, but would encourage Quintillion to conduct their installation in the Beaufort as early as possible in the open water and do everything possible to avoid activity in Mid-September to Mid-October.

Quintillion committed to continue to conduct communication with the whalers and will attend the Fall pre-fire meeting to provide an update on the progress and address any potential issues that have arisen.

Quintillion Subsea Cable System



BARROW WHALING CAPTAINS ASSOCIATION

Barrow, Alaska

January 2016



About Quintillion

- Headquartered in Anchorage, Alaska
- Carrier for the local provider – we provide high speed “broadband” capacity to the local providers.
- Managed by Elizabeth Pierce, CEO and Founding Partner
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Purpose and Benefit to Community

High-speed Bandwidth stimulates community development:

- Enables extensions to connect more communities
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Why Alaska Needs Fiber...

Location	Monthly Cost	Speed (Mbps)	Monthly Capacity Limit	Price Per Mbps
Barrow, Alaska ²	\$215.00	6	60 Gbps	\$35.84
Kansas City, MO ¹	\$70.00	1000	No Cap	\$0.07
Chattanooga, TN ¹	\$69.69	1000	No Cap	\$0.06
San Francisco, CA ¹	\$30.00	200	No Cap	\$.015
Seoul, South Korea ¹	\$30.30	1000	No Cap	\$0.03

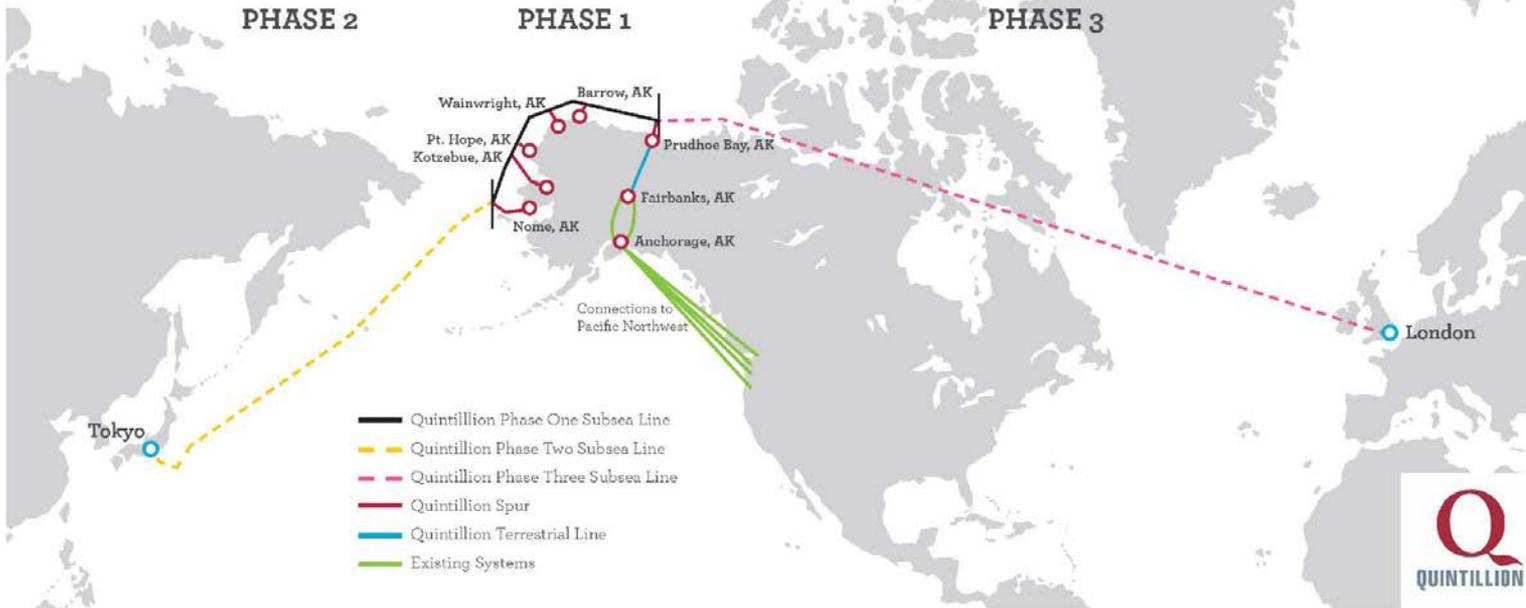
(1) As published by Open Technology Institute, New America Foundation; "The Cost of Connectivity 2014"

(2) Quoted on GCI website, October 2014



PLANNED SEGMENTS—PHASED APPROACH
ALASKA—JAPAN—EUROPE

TOKYO-ALASKA-CANADA-LONDON



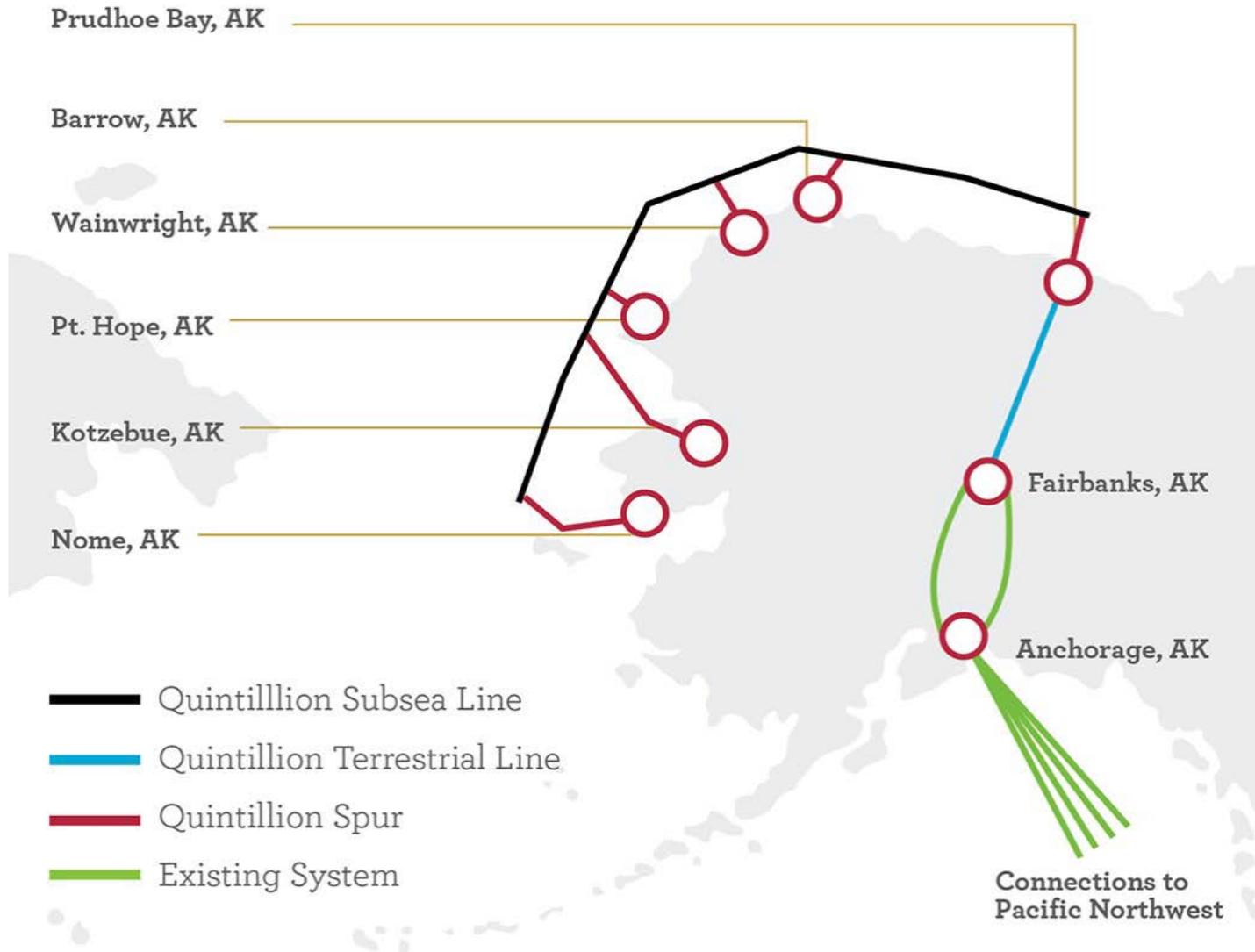
Phase 1 —
Nome to Prudhoe Bay, Alaska with spurs to Kotzebue, Point Hope, Wainwright and Barrow. Prudhoe Bay connects to new fiber extending to Fairbanks. Fairbanks connects to existing fiber optic cable systems to Anchorage and the US Pacific Northwest.

Phase 2 —
Additional subsea fiber would extend from Phase 1 by starting at Nome, Alaska to Japan, with options for additional Alaska spurs. *Currently in development.*

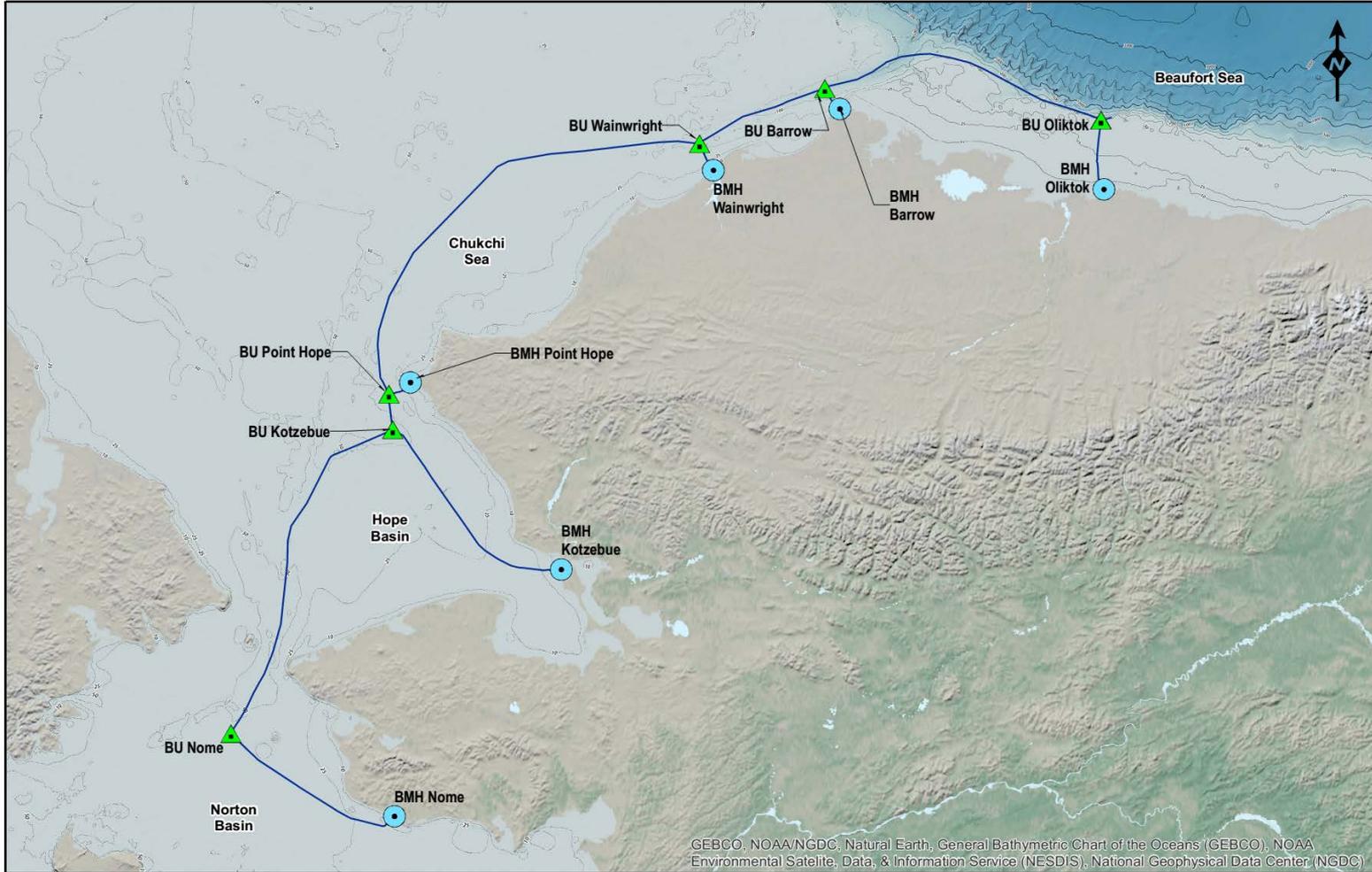
Phase 3 —
This phase would lay additional subsea fiber starting from Prudhoe Bay, Alaska to Canada and Europe, with planned spurs into the Canadian Arctic.



ALASKA SYSTEM



Route Map – Phase I Alaska



GEOBCO, NOAA/NGDC, Natural Earth, General Bathymetric Chart of the Oceans (GEOBCO), NOAA Environmental Satellite, Data, & Information Service (NESDIS), National Geophysical Data Center (NGDC)

<ul style="list-style-type: none"> ● BMH ▲ BU — Fiber Optic Lines 	<p>QUINTILLION Route Map</p>	<p>0 75 150 225 Km</p>	<p>FIGURE: X-X</p>
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Projection: Alaska Albers



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*International Submarine Cable Protection Committee, 2013



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System Builder: Alcatel Submarine Networks

- A leading global supplier of subsea cable systems
- Progress is slow and steady
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Coordinating our Plan of Cooperation

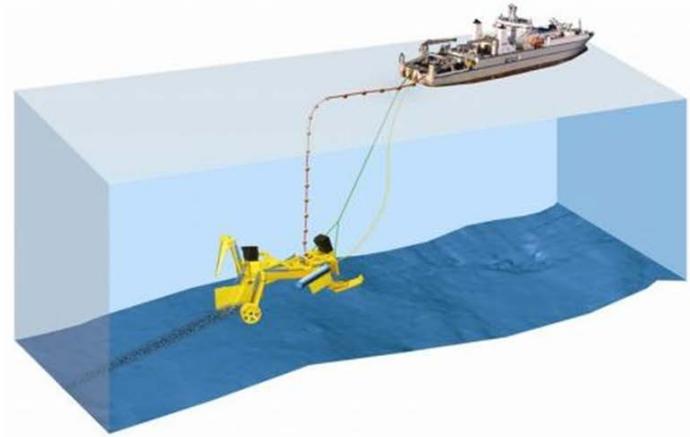
- Meetings start in January 2016 with this meeting
- AEWG Min Convention February 1-4
- Landing Communities in February



Cable Laying vs. Seismic Operations

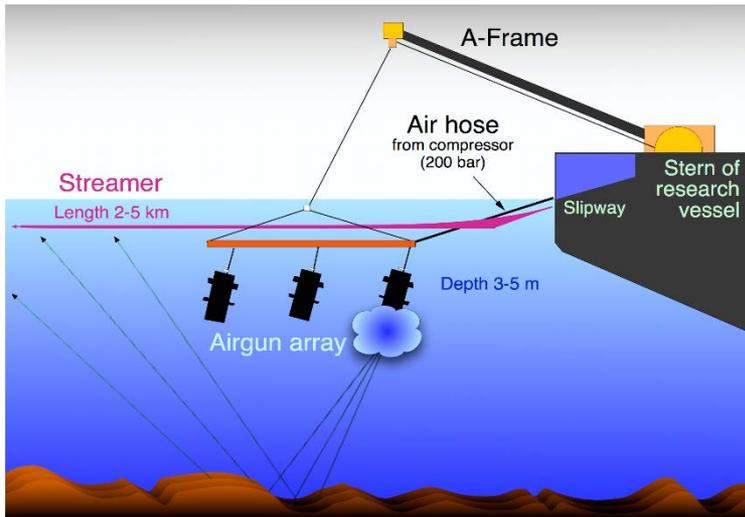
Cable Laying

- Vessel travels at 0.5 kt
- Produce noise in the 170 to 180 dB re 1 μ Pa (rms) range Seismic vessels



Seismic

- Vessel towing an array travel at 5 kt, 10 times faster
- Seismic operations produce noise in the 220 to 240 dB re 1 μ Pa (rms) range

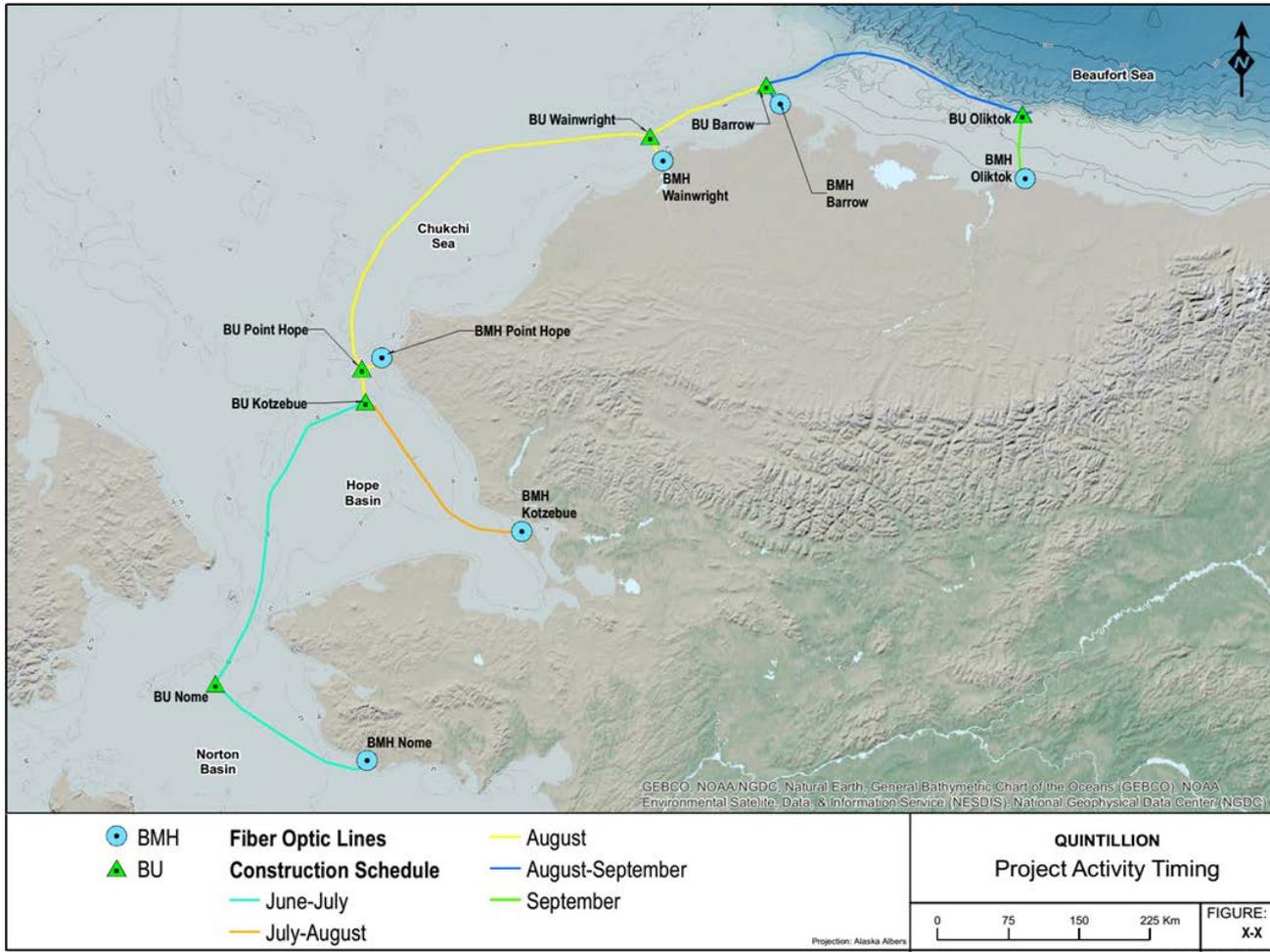


Ship Specifics

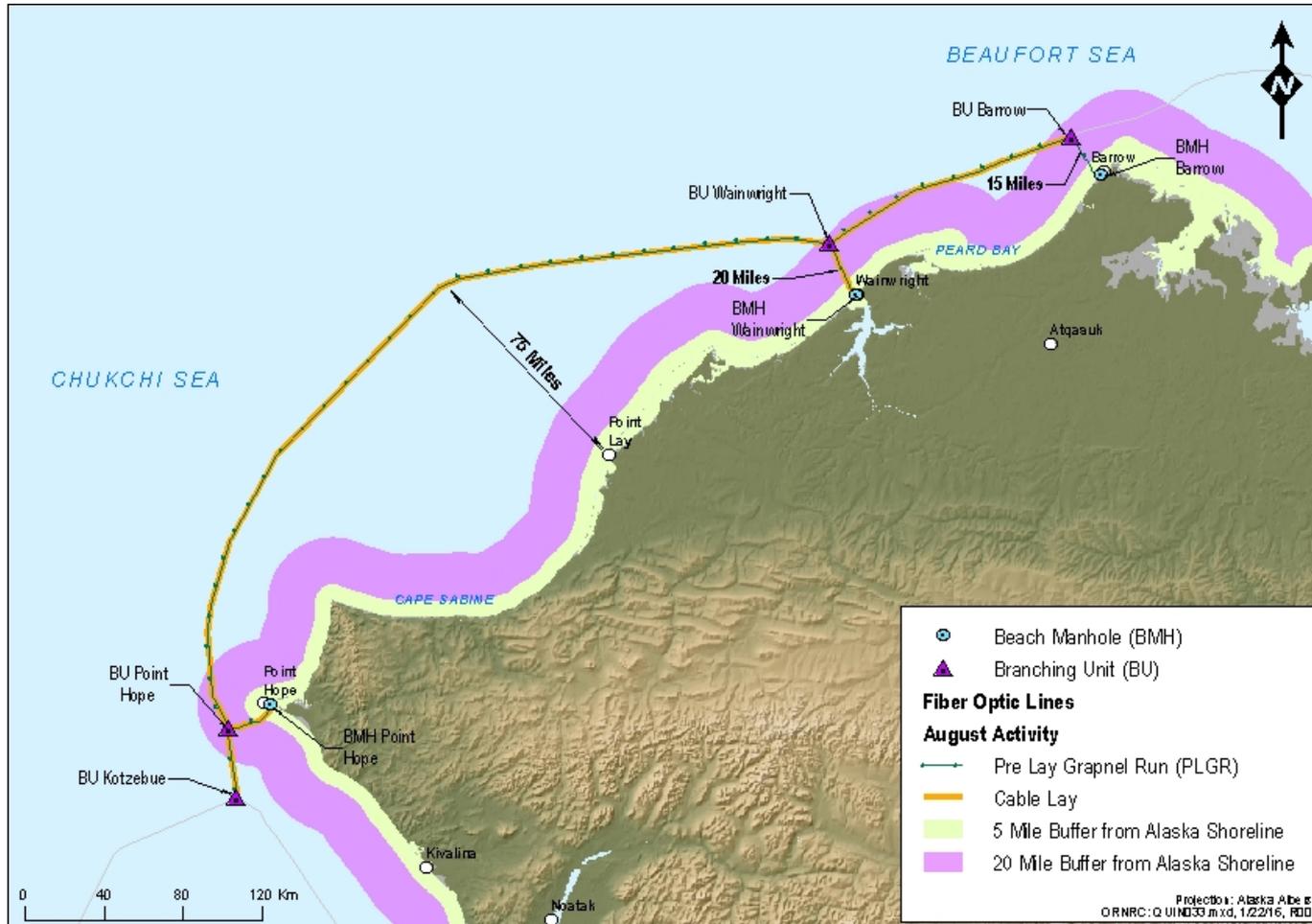
- **Name** – Ile De Brehat
- **Length Overall** – 460 ft.



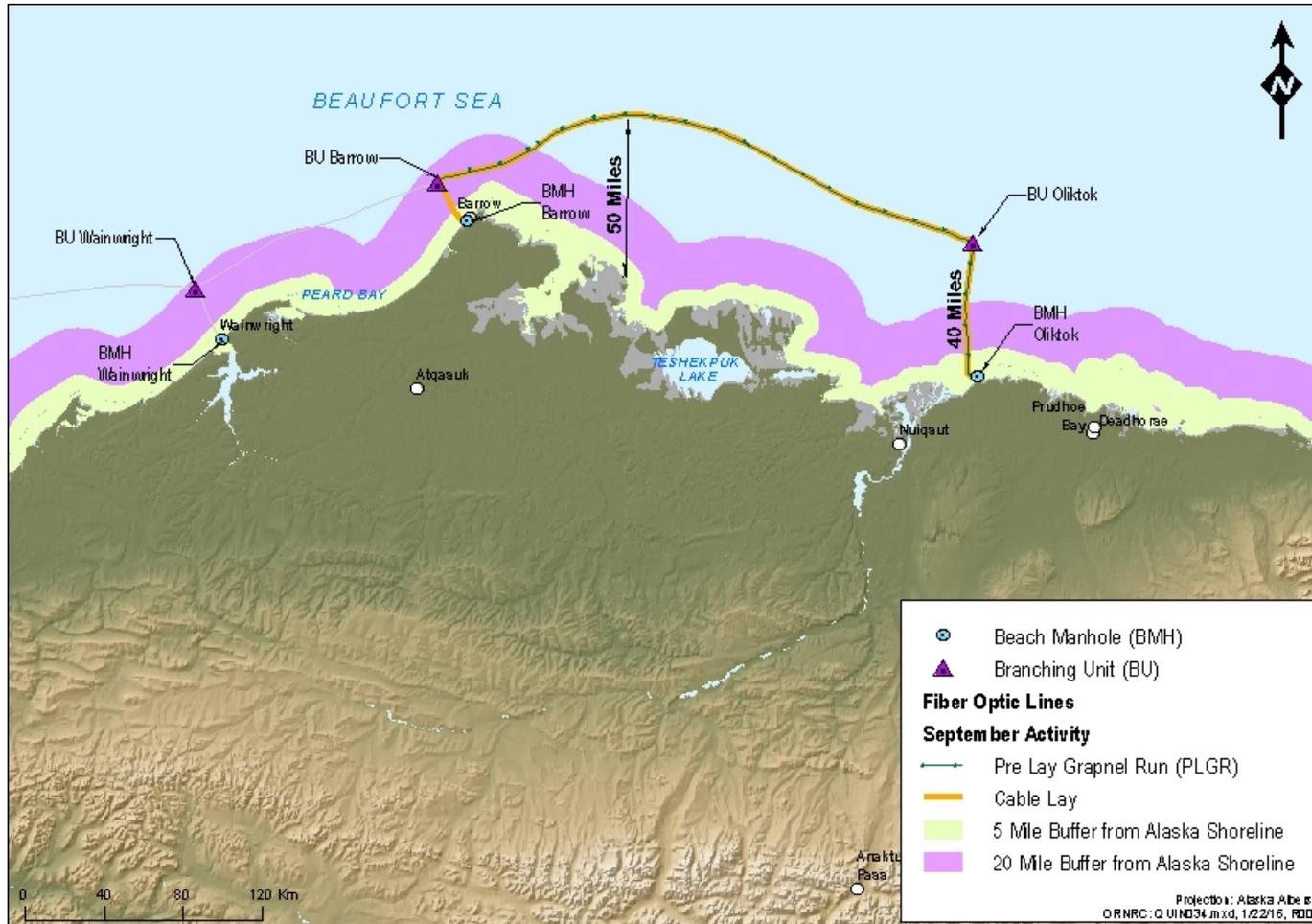
Preliminary 2016 Summer Schedule



Wainwright to Barrow



Barrow to Olitok



IHA and Plan of Cooperation

Quintillion has applied for an IHA

- Integrating data from summer program and obtaining vessel data
- Assessing potential to add another vessel
- 4MP Developed
- Peer Review Meeting slated for early March

Plan of Cooperation

- Gathering input from Whaling Captains
- Quintillion will donate membership to the Alaska Marine Exchange
- Early and frequent communication

Coordinating our Plan of Cooperation

- Glenn Ruckhaus at Owl Ridge is leading our planning efforts
- Planned Meeting:
 - AEWC and Whaling Associations
 - Community information meetings
 - Commission Meetings – Nanuuq, Kawerak, Ice Seal
 - NSB Planning Department
 - NSB Wildlife Department



Information Sharing

- Newsletters and Mailings
- Television and Public Radio Announcements
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Quintillion Subsea Fiber Project

Thank you 

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We are on schedule to deliver broadband service to the landing communities in 2017.



The map shows the Quintillion Fiber Optic Installation Progress in the Arctic region. It includes labels for Barrow, Wainwright, Pt Hope, Kotzebue, and Nome. A legend indicates: Proposed Fiber Optic Lines (black line), Proposed 2016 Installation (blue line), and Work Completed 2015 (yellow line). The map also shows the Chukchi Sea, Beaufort Sea, and Bering Sea.



For more information

Please contact Quintillion for more information

info@Qexpressnet.com

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201 East 56th Avenue, Suite 300
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www.Qexpressnet.com

Or
Glenn Ruckhaus
glenn@owlridenrc.com
907-891-7265





Meeting Minutes			
Location:	Barrow High School, Barrow, AK	Date	February 4, 2016
Subject	AEWC - Industry Meeting on The 2016 Conflict Avoidance Agreement	Call-in #	
Attachments	Meeting Itinerary		
Attendees			
This meeting consisted of whaling captains from all the different whaling villages and was open to the public. There was not a sign in sheet.			

Minutes
<p>Presentation was given by Elizabeth Pierce at the AEWC Industry Meeting</p> <ul style="list-style-type: none"> There was one comment by John Hopson from Wainwright to “Hurry up” and complete the project quickly

Slides of Interest	
Slide Number	Concern / Interest
N/A	N/A

Action Items	
Item	Action
1	N/A



**ALASKA ESKIMO WHALING COMMISSION
AEWC – INDUSTRY MEETING ON
THE 2016 CONFLICT AVOIDANCE AGREEMENT
Barrow High School, Barrow, AK
February 4, 2016
9:00 A.M. – 5:00 P.M.**

Thursday, February 4

- 8:00** **BREAKFAST – Provided by ConocoPhillips**
- 8:30-8:45** **CALL TO ORDER
INVOCATION
INTRODUCTIONS
Harry Brower Jr., AEWK Chairman**
- 8:45-9:15** **USCG DISTRICT 17 - Admiral Dan Abel**
- 9:15-10:00** **AEWC & WHALING CAPTAINS MEETING (closed)**
- 10:00-10:15** **Break Provided Iiisagvik**
- 10:15-11:00** **BOEM PANEL & UPCOMING RESEARCH PROJECTS**
- Discussion with Whaling Captains on Research and Analysis
supporting decision-making for the Liberty Project, including:
Traditional Knowledge, Marine Mammals, Fisheries, and Benthos**
- Panel Chair: Dr. James J. Kendall
Panel Members: Ms. Carol Fairfield; Ms. Frances Mann; Ms. Kate
Wedemeyer; and, Dr. Dee Williams**
- 11:00-11:30** **Peter Boveng – NOAA Aerial Seal and Polar Bear Surveys**
- 11:30-11:45** **ALASKA BERING SEA CRABBERS: Mark Gleason**
- 11:45-12:00** **SAEXPLORATION: Rick Trupp**
- 12:00 – 1:15** **Lunch – Provided by Exxon Mobil**
- 1:15 – 1:30** **HILCORP: Jim Winegarner**
- 1:30-1:45** **EXXON MOBIL: Mark Brundage**

- 1:45-2:15** **NATIONAL SCIENCE FOUNDATION: Sikuliaq
Laurie Juranek and Rachel Sipler**
- 2:15-2:45** **NOAA: Overview of Upcoming NOAA Research Projects
Doug Demaster**
- 2:45-3:00** **FAIRWEATHER SCIENCE: Sheyna Wisdom, Operating Manager**
- 3:00-3:15** **QUINTILLION: Elizabeth Pierce**
- 3:15-3:30** **BREAK Provided by Ilisagvik**
- 3:30-4:00** **NOAA: Report on Unmanned Aerial Survey of Whales
Robyn Angliss**
- 4:00-4:30** **Arctic Waterway's Safety Committee**
- 4:30** **ADJOURN**



Meeting Minutes					
Location:	Community Center- Wainwright, AK		Date	February 8, 2016	
Subject	Community Informational Meeting		Call-in #		
Attachments					
Attendees					
Name	Company	Present	Name	Company	Present
Elizabeth Pierce	Quintillion	X	Glenn Ruckhaus	Owl Ridge	X
Edith Vorderstrasse	Quintillion	X	Emmanuel Danjou	Alcatel-Lucent	X
Amyanne Pierce	Quintillion	X			
See Attached Sign In Sheet for Community Attendees and Contact Information					

Minutes
<p>Elizabeth Pierce presented the attached presentation: Comments from the presentation are below:</p> <ul style="list-style-type: none"> • Why is the project starting in Alaska? <ul style="list-style-type: none"> ○ Starting in Alaska because it is a more complex system ○ After the work is completed Quintillion will be coming back to the villages for to celebrate turning on the service • Another benefit expected is the lowering of costs and an improvement of quality for services <ul style="list-style-type: none"> ○ QSN was clear that the lowering of costs will occur over time, it will not be instantaneous when the fiber optic service is turned on • While comparing seismic activity to cable laying there was concern from an attendee (Raymond) about the impact that would occur <ul style="list-style-type: none"> ○ His concern was directed at the impact of seismic activities, it was clarified that seismic was not occurring. The seismic information was only there to show that cable laying is less disruptive. • Quintillion will be working with the community to ensure that activities do not interfere with the subsistence hunts. Daily reports will be distributed to whaling captains and other community leaders. • Work in Wainwright is targeted for July-August but with consideration of the beluga activity • Questions / Comments: <ul style="list-style-type: none"> ○ Schedule does not conflict with bowhead hunt ○ Request to avoid beluga hunt which occurs over one to two days ○ Residents asked to see the cost of service examples and comparisons again for further explanation. ○ The depth cable will be buried - <ul style="list-style-type: none"> ▪ Around Wainwright the cable will be buried around 1 meter to 2 meters deep ▪ The HDD on the shore side is 80 feet below the surface and goes out about a kilometer ○ Community is supportive of the project and want it completed, "Hurry up" (John Hopson) ○ One resident: wanted QSN to be aware of walrus foraging near Hannah Shoal July and August

Slides of Interest	
Slide Number	Concern / Interest
4	Benefits to the community (health and emergency services, education and entertainment value)
13	Schedule

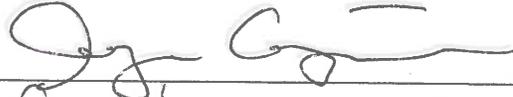
Action Items	
Item	Action
1	Quintillion will work with the community to for the daily report distribution
2	Quintillion assured the community the work will happen with consideration to traditional activities

Name	Address	Signature
Terry Tagarook	POB 96 Wainwright, AK	Terry Tagarook
Joy Nayakik	P.O. Box 23 Ain, AK 99782	Joy Nayakik
Ellen Phillips	Box 113 Wain AK 99782	Ellen Phillips
Rossman Peetook	Box 43 Ain	for Rossman Peetook
John H J-		J H J
Lloyd Tagarook	PO Box 109	Lloyd Tagarook
Hazel Phillips	PO Box 185	Hazel Phillips
Bonnie Spencer	P.O. Box 87	Bonnie Spencer
Joshua Okpawuk	186	Joshua Okpawuk
Raymond Ahwida	35	Raymond Ahwida

Name	Address	Signature
Danny Akpik	PO Box 23 99782	Danny Akpik
Muel Panik	Box 28	Muel Panik
Hellen K. Beste	Box 164 Wainwright AK 99782	Hellen K. Beste
Archie Swan	Box 129 Wainwright AK 99782	
Egna Beth	Box 34 AIN AK 99782	Egna Beth
Dennis Aveoganna &	Box 82 AIN	Dennis Aveoganna
Virginia Aveoganna	Box 82 AIN	Virginia Aveoganna
Elizabeth Phillips	Box 15 AIN	Elizabeth Phillips
Della R. Driggs	Box 102 AIN	Della R. Driggs
Maulene Okaloh	Box 186 AIN	Maulene Okaloh

Name	Address	Signature
Marjorie Angashuk	P.O. Box 54 Wainwright, AK 99782	Marjorie Angashuk
Patricia Marie Aasegama	P.O. Box 70 Wainwright	Patricia Marie Aasegama
Eunice Ahvakana	P.O. Box 148	Eunice Ahvakana
Norman Tazrak	Box 90	Norman Tazrak
Roy W. Ekak	box 59	Roy W. Ekak
Kenneth Avasheguk	Box 84	Kenneth Avasheguk
Amy Rose Okpeaka	Po box #1	Amy Rose Okpeaka
Sherry Ahmrogak	Po Box 98	Sherry Ahmrogak
Edward Ungudruk	P.O. Box 108 Wainwright, AK 99782	Edward Ungudruk
Bessie Ahvakana	P.O. Box 61 Wainwright AK 99782	Bessie Ahvakana

99782

Name	Address	Signature
Joyce Captain	P.O. Box 87	
Cynthia Black	P.O. Box 87	



Meeting Minutes					
Location:	Olgoonik Camp - Wainwright, AK	Date	February 8, 2016		
Subject	Wainwright Whaling Captains Meeting	Call-in #			
Attachments	Sign In Sheets				
Attendees					
Name	Company	Present	Name	Company	Present
Elizabeth Pierce	Quintillion	X	Glenn Ruckhaus	Owl Ridge	X
Edith Vorderstrasse	Quintillion	X	Emmanuel Danjou	Alcatel-Lucent	X
Amyanne Pierce	Quintillion	X			
See Attached Sign In Sheets for Wainwright Whaling Attendees and Contact Information					

Minutes
<p>Elizabeth Pierce presented the attached presentation: Comments from the presentation are below:</p> <ul style="list-style-type: none"> • An example of the cable was presented to the whaling captains • Access opportunity <ul style="list-style-type: none"> ○ Landing in Wainwright will allow for connection to Atqasuk • The late July beluga hunt was addressed <ul style="list-style-type: none"> ○ The beluga hunt lasts 1 to 2 days ○ The belugas feed at Icy Cape before moving on to Wainwright ○ Alcatel stated that the Wainwright landing would occur in August • Discussion on Oliktok installation <ul style="list-style-type: none"> ○ It was committed that the Oliktok section of installation would be completed in 49 days • Whaling Captains questioned the installation method <ul style="list-style-type: none"> ○ Why not go overland with fiber optic cable instead of subsea installation? (John Hopson) • Communication throughout the project <ul style="list-style-type: none"> ○ The best form of communication is email ○ Communication emails should go to all captains

Slides of Interest	
Slide Number	Concern / Interest
8	Differences between cable laying and seismic activities
12	Schedule - There is a late July beluga hunt in the project area
13	Oliktok installation
14	IHA and Plan of Cooperation - input from whaling captains and subsistence hunters

Action Items	
Item	Action
1	Alcatel current schedule is that the Wainwright landing would occur in August
2	Alcatel offered to have delegates tour a vessel while it is docked in Nome

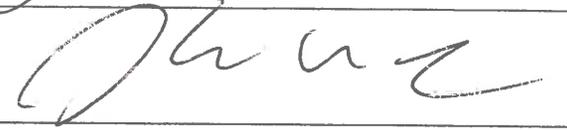


**Community Update - Quintillion Subsea Cable System
Wainwright - Public Meeting, Monday February 8, 2016**

Whaling Captains

Name	Address	Signature
Walter Petersen	Ain	WALTER PETERSEN JR
Jerry Ahmaogak edwin.tazruk@north-slope.org	Ain jpahmaogak@gmail.com	
EDWIN TAZRUK	WAINWRIGHT AKSIA, 99752 Box 174	
Chester.Ekak@hotmail.com Chester Ekak	PO Box 46 Wainwright, AK 99782	
Jack Panik	PO Box 4 AIN 99782	

Whaling Captains

Name	Address	Signature
Jason Ahrens	Po box 76 Johns Creek Johns Creek, GA johns.creek@gmail.com	
John Hopson Jr	69	
	johopson@asrc.com	



Meeting Minutes					
Location:	Qalgi Community Center - Point Hope, AK	Date	February 9, 2016		
Subject	Community Informational Meeting	Call-in #			
Attachments					
Attendees					
Name	Company	Present	Name	Company	Present
Elizabeth Pierce	Quintillion	X	Glenn Ruckhaus	Owl Ridge	X
Edith Vorderstrasse	Quintillion	X	Emmanuel Danjou	Alcatel-Lucent	X
Amyanne Pierce	Quintillion	X			
See Attached Sign In Sheet for Point Hope Community Attendees and Contact Information					

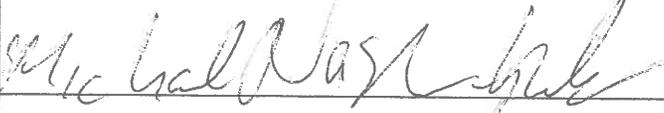
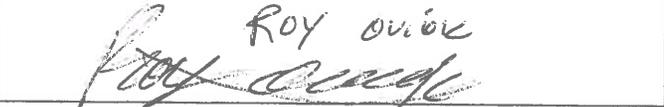
Minutes
<p>Elizabeth Pierce presented the attached presentation which was translated by Dorcas Rock. Comments from the presentation are below:</p> <ul style="list-style-type: none"> • The project schedule has been planned around subsistence activities • The audience seemed skeptical and had a lot of questions: <ul style="list-style-type: none"> ○ Many questions regarding how this cable network will effect cost and competition ○ How long will the cable last? <ul style="list-style-type: none"> ▪ A minimum of 30 years, it is the highest quality cable available in the market to extend service life ○ Is there collaboration between Quintillion and scientific studies in the area? ○ Will there be floating markers to identify the cable route? <ul style="list-style-type: none"> ▪ There will not be floating markers • Most of the questions came from Caroline Cannon and Jack Schafer • The Native Village of Point Hope executive director asked questions regarding the USACE application <ul style="list-style-type: none"> ○ She had received the Public Notice for the application and had questions regarding distance requirements and disturbance that could occur • The community is hoping that the service is delivered as scheduled. • The community does not want any setbacks or delays and believes that Quintillion has done their research on the area and are properly prepared • Key communicators in the meeting included: <ul style="list-style-type: none"> ○ Caroline Cannon – caroline.cannon@north-slope.org ○ Peggy Frankson – Native Village of Point Hope – peggy.frankson@tikiqaq.org

Slides of Interest	
Slide Number	Concern / Interest
N/A	N/A

Action Items	
Item	Action
1	Recommend for ASTAC will go to Point Hope for a meeting to address costs.

Name	Address	Signature
Rickey George		Rickey George
Aggie Kowanna	P.O. Box 21	Aggie K
Maurin Nashookput	P.O. Box 110	Maurin N.
Fannie Frankson	Po Box 130	Fannie Frankson
Eva Nashookput	P.O. Box 223	Eva
Hannah Killigvak	Po Box 24	Hannah Killigvak
Percy Hank	Po Box 404	Percy Hank
Annie Attungane	P.O. Box 31	Annie Attungane
Dodo Juba	130711	Dodo Juba
Jillie Jangput	Box 63	

Pt. Hope

Name	Address	Signature
TARIEK Oviok	Po Box 332	
Mittalell Connor	Po Box 189	
		
Bernie Kowunna	P. O Box 240 PHO, AK	Bernie Kowunna
	P.O. Box 253. PHO AK	
Lloyd Vint		
Peggy Frankow	Box 467	
Henry Attungana In	Box 133	
Aggie Attungana	Po Box 133 Point Hope, AK 99706	
Henrietta Attungana	P.O. Box 133 Point Hope, AK 99706	



Community Update – Quintillion Subsea Cable System Point Hope – Public Meeting, Tuesday February 9, 2016

Name	Address	Signature
Doreus Rock	PO Box 68 Point Hope, Ak	Doreus Rock
Christine Tippin	Box 305	Christy
Diana Octalik	PO Box 66 Pt. Hope Ak 99766	Diana Octalik
Samantha Franzen	PO Box 467 Pt Hope AK 99766	Samantha
Margaret Octalik	Box 45 P.H.O.	Margaret
Patricia Huddell	Box 28	Patricia Huddell
Caroline Nashookpuk	Box 215	Caroline Nashookpuk
Seymour Koonalok	Box 279	Seymour Koonalok
RILEY Nashookpuk	Box 121	



Pt. Hope

Name	Address	Signature
Rose Ella Stone	Box 147 Pt Hope AK	Rose Stone
Wesley Ersingh	Box 45	Wesley Ersingh
Calvin Otkolik	Po Box 45	Calvin Otkolik
Caroline Cannon	PO Box 189	Caroline Cannon
Mary J. Attegar	P.O. Box 133	Mary J. Attegar
Sally Killig	P.O. Box 35	Sally Killig
Jack Schaefer	MAYOR City of Pt Hope Box 169 P.O. AK 99766	Jack Schaefer
Jack Schaefer	AK WAIRUS Commission PO Box 266 Pt. Hope AK 99766	Jack Schaefer
Edna Woshel	PO Box 282 Pt. Hope	Edna
Thomas Killiguk	Bx 35 Pt Hope AK ⁹⁹⁷⁶⁶	Thomas Killiguk

Name	Address	Signature
Tilbe Millgrock	PO Box 63 270 Sisuaq St	
Ray Frank	Box 56	
Percy Kingik	Po Box 3 Point Hope AK 99766	



Meeting Minutes					
Location:	Restaurant – Point Hope, AK	Date	February 9, 2016		
Subject	Tikigaq Whaling Captains Meeting	Call-in #			
Attachments					
Attendees					
Name	Company	Present	Name	Company	Present
Elizabeth Pierce	Quintillion	X	Glenn Ruckhaus	Owl Ridge	X
Edith Vorderstrasse	Quintillion	X	Emmanuel Danjou	Alcatel-Lucent	X
Amyanne Pierce	Quintillion	X			
See Attached Sign In Sheet for Tikigaq Attendees and contact Information					

Minutes
<p>Elizabeth Pierce presented the attached presentation: Comments from the presentation are below:</p> <ul style="list-style-type: none"> • Company and project history <ul style="list-style-type: none"> ○ Quintillion was affiliated with Arctic Fiber and has sense taken over the company and will continue pursuing their project but now the system will run out of Alaska ○ All private investors ○ System must be done in phases and since there is already a fiber optic network in Alaska the first Phase will be done here • An attendee asked why other villages are not included, it was explained that as a privately funded project investors require a business plan to ensure they will get a return on their investment. <ul style="list-style-type: none"> ○ After the initial system is in place there may be opportunities to expand to the other villages • The fire chief brought attention to a letter that he received from Quintillion regarding requirements for a communications building and generator building, those issues will be addressed separately with him. • Reviewed future benefits for health care and lower service costs <ul style="list-style-type: none"> ○ Quintillion provides service to all providers so there is a competition among providers that leads to better options and service for their customers. • The possible risks to the system includes sabotage and earthquakes • Work in Point Hope this summer will include a HDD bore and the completion of buildings along with cable laying in the open water. • As of now these systems are lasting a minimum of 30 years • Quintillion is partnered with Alcatel who has the most reliable repeater in the industry • 150 tons is the breaking point for the cable that is being installed • The whaling captains concern regarding the schedule is the June and July hunting ooganuk and walrus (Clark Lane) <ul style="list-style-type: none"> ○ Early August is the likely timing for cable laying • Communication is the form of mitigation <ul style="list-style-type: none"> ○ Quintillion will be back after the spring whaling season for another meeting ○ If there are any questions or concerns do not hesitate to contact Quintillion • Questions / Comments <ul style="list-style-type: none"> ○ The captains are surprised at the small size of the cable ○ It would have been nice if all of the cable out there was buried but they

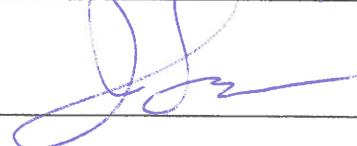
Minutes	
	<ul style="list-style-type: none"> ▪ The risk factor of a depth of over 60 meter water depth does not warrant a burial ▪ Another consideration is that if something were to happen the wire would need to be brought back up. ○ Cables last over 30 years ○ How do you fix a broken line? Does it have to be completely replaced? <ul style="list-style-type: none"> ▪ No, cables can be fixed with a “joint” ○ What was the driving point of this project? <ul style="list-style-type: none"> ▪ A lot of demand in the area ○ RT Casey is the contractor for the HDD drilling that will occur earlier than cable laying in the open water.

Slides of Interest	
Slide Number	Concern / Interest
N/A	N/A

Action Items	
Item	Action
1	Quintillion will be back for another community meeting after the spring whaling season
2	Quintillion will communicate with RT Casey to get the anticipated schedule for the HDD drilling and inform the Captains

12:30 -

Pt. Hope Whaling Captains 2/9/15

Name	Address	Signature
ARQUIKUK HAWK	P.O. Box 287 ahisr@hotmail.com	
Henry Koonook	PO Box 34 Pt. Hope, Ak. 99766	
Lazarus Uliigook	Lazarus Uliigook@gmail.com	
Ardley O. Oolalik In	PO Box 66 Pt. Hope AK 99766	
Isaac Uliigook	P.O. Box 35 Kuparuk 5th Pt. Hope AK 99766	
Elijah Lane ^{Five} Chief/SAR	Box 161 Pt. Hope XXXXXXXXXXXXXXXXXXXX Elijah.lane@NorthSlope.org	
CLARK LANE S	Box 202 Point Hope AK 99766 clanc@TIKIGAQ.COM	
Jacob Lane Ja	Box 151 Della Lane@hotmail.com	



Meeting Minutes					
Location:	NW Arctic Borough Assembly Chambers Kotzebue, AK			Date	February 10, 2016
Subject	City Management Meeting			Call-in #	
Attachments	Business Cards, 2 Maps				
Attendees					
Name	Company	Present	Name	Company	Present
Elizabeth Pierce	Quintillion	X	Glenn Ruckhaus	Owl Ridge	X
Edith Vorderstrasse	Quintillion	X	Emmanuel Danjou	Alcatel-Lucent	X
Amyanne Pierce	Quintillion	X	Mike Cooper	Acting City Manager	X
Randy Walker	Public Works Director	X	Grant Hildreth	City Planner	X

Minutes
<p>The presentation was not provided in this meeting. Comments from the meeting are below:</p> <ul style="list-style-type: none"> • Has a Tidelands Permit been obtained- <ul style="list-style-type: none"> ○ The HDD has already been installed • Building Permit- <ul style="list-style-type: none"> ○ This past fall utilities were located but city management is not sure if that was for this project. ○ Will additional locates be required this year? • Quintillion showed city management representatives the onshore route of the cable that is to be installed on a figure that the city provided (attached) • The city provided Quintillion with a copy of their tidelands map (attached) • City management asked what the required width will be for the utility ROW <ul style="list-style-type: none"> ○ NHTI are the design engineers and can provide this information • NHTI will be doing the remainder of the outside work and will provide a schedule and as-builts to the City • City management asked how internet service will be provided from OTZ to the consumers <ul style="list-style-type: none"> ○ That is a question for OTZ, Quintillion provides service to all providers then individual companies decide what to offer their customers • Some utility lines will need to be relocated prior to work starting • The Il de Brehat and the sister ship that will be used in cable laying have a draft of 15 meters • Can the city get the bathymetry information for the area? <ul style="list-style-type: none"> ○ Fugro did the survey and Quintillion is trying to get the raw data to submit to NOAA, which would make the raw data available to the public ○ NOAA will be back in the area this summer but their work is unknown • Quintillion contacted George Herr and sent City management's contact information and questions <ul style="list-style-type: none"> ○ George will be contacting them to set up a call to answer their questions • All three people in the meeting and Derek Martin (City Manager) will be added to the Owl Ridge list of people interested in receiving daily reports • The planning commissioner chairman Sandy Huss will be attending the community meeting

Slides of Interest	
Slide Number	Concern / Interest
N/A	The presentation was not given during this meeting.

Action Items	
Item	Action
1	Quintillion will follow up with NHTI to make sure information for a building permit is supplied to NWAB
2	Quintillion will get the width of the utility ROW from NHTI
3	NHTI will provide a schedule and as-builts to the City
4	Owl Ridge will send out regular updates/schedule of activities to the meeting attendees and Derek Martin



Grant Hildreth Sr.

City Planner

P.O. Box 46

Kotzebue, AK 99752-0046

PH (907)442-5203

Cell (907)412-1989

Fax (907)442-2155

GHildreth@kotzebue.org



Randy Walker

Public Works Director

P.O. Box 46

Kotzebue, AK 99752-0046

PH (907)442-5201

Cell (907)995-2680

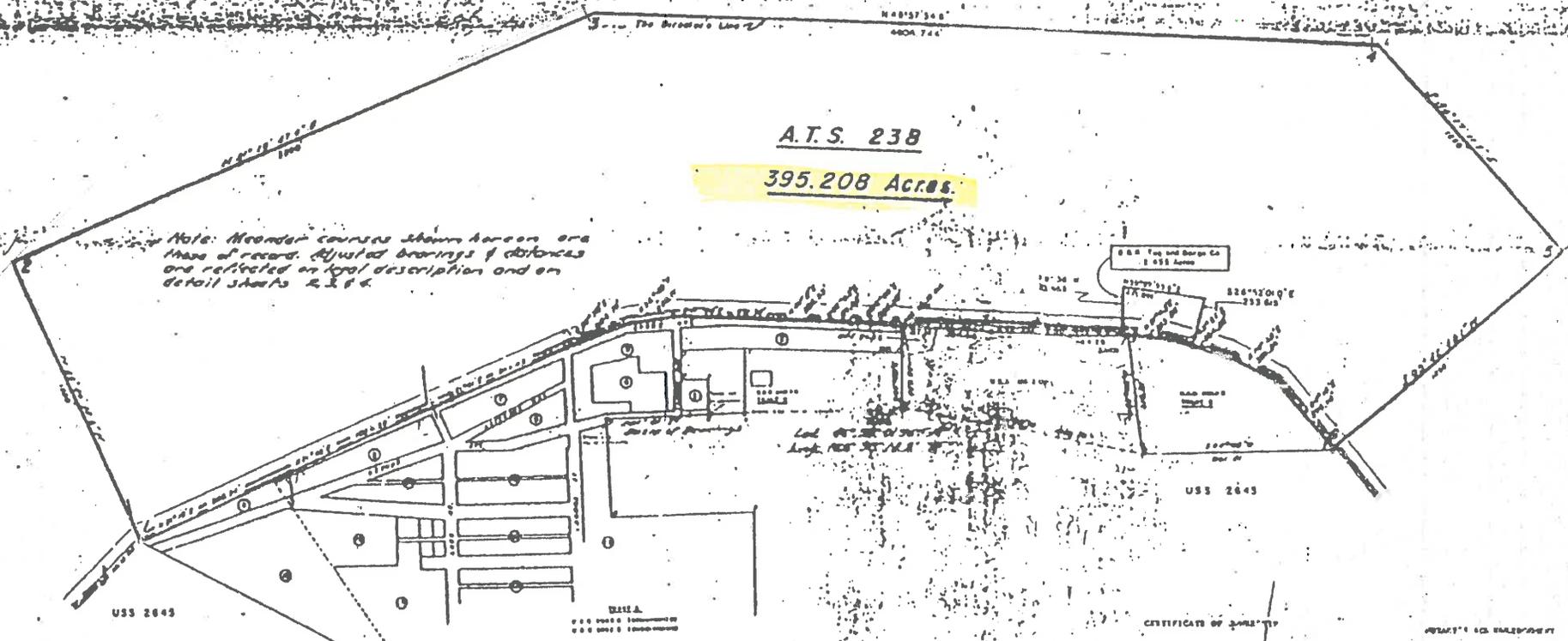
Fax (907)442-2155

RWalker@kotzebue.org

TIDE

Kotzebue

Sound



TOWNSITE OF KOTZEBUE

CERTIFICATE OF CORRECTION
 The City of Kotzebue hereby certifies that it is the legal claimant of the tide and submerged lands shown hereon, and that the plat of survey is hereby approved by act of the City Council.

STATE OF ALASKA
 This is to certify that on the 23rd day of February 2016 before me, the undersigned, a Notary Public in and for the State of Alaska, personally appeared _____, known to me to be the Mayor and City Council of the City of Kotzebue, Alaska, and that they requested the recording of the same.

CERTIFICATE OF CORRECTION
 The City of Kotzebue hereby certifies that it is the legal claimant of the tide and submerged lands shown hereon, and that the plat of survey is hereby approved by act of the City Council.

Paul S. Hannell
 Mayor

Paul S. Hannell
 City Council

NOTARY PUBLIC STATEMENT
 I, _____, Notary Public in and for the State of Alaska, do hereby certify that the foregoing is a true and correct copy of the original as shown to me by _____, Mayor of the City of Kotzebue, Alaska, and that the same is a true and correct copy of the original as shown to me by _____, City Council of the City of Kotzebue, Alaska.



Meeting Minutes					
Location:	NW Arctic Borough Assembly Chambers Kotzebue, AK			Date	February 10, 2016
Subject	Community Informational Meeting			Call-in #	
Attachments					
Attendees					
Name	Company	Present	Name	Company	Present
Elizabeth Pierce	Quintillion	X	Glenn Ruckhaus	Owl Ridge	X
Edith Vorderstrasse	Quintillion	X	Emmanuel Danjou	Alcatel-Lucent	X
Amyanne Pierce	Quintillion	X			
See Attached Sign In Sheet for NWAB Community Attendees and Contact Information					

Minutes
<p>Elizabeth Pierce presented the attached presentation: Comments from the presentation are below:</p> <ul style="list-style-type: none"> • Audience stated that the commercial fishing was conducted before and well outside of the fiber optic line installation. All Fishing is set net from shore, no conflicts with fishing activity • From the start of open water until freeze up, there are boats, fuel barges, and supply barges constantly active in the Bay. The cable lay vessels will not be noticed and are minimal addition to the usual maritime activity. • Audience do not identify any potential subsistence conflicts. They are anxious to see the fiber optic cable installed and available in the community

Slides of Interest	
Slide Number	Concern / Interest
N/A	N/A

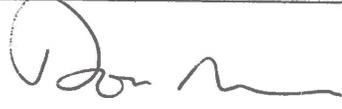
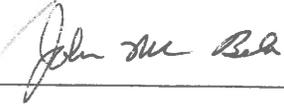
Action Items	
Item	Action
1	No Action Items were Identified



18 or older

**Community Update - Quintillion Subsea Cable System
Kotzebue - Public Meeting, Wednesday February 10, 2016**

Name	Address	Signature
Brian McKay	PO 811 KOTZ	
Stella Atoruk	Box 1028 Kotzebue, AK	
Louisa Connell	Box 95 Kotzebue	
Lucy Nelson	Box 1197 Kotzebue	
Chester L Fallis	Box 922 KOTZEBUE	
Cyrus Harris	Box 755 Kotzebue	 Alaska Beluga Whale Committee
MOENSTORM LIFE	PO Box 203 Kotzebue	
Dwight Richards	PO Box 1128	
Dorene Stein-Kammur	Box 824 OTZ	

Name	Address	Signature
Doug Neal	Box 714, Kotzebue	
Dean Westlake	Box 636 Kotzebue	
Mark Belue	Box 501. Kotzebue	
Tracie Metz	Kotzebue	
Zona Zona Hogan	Kotzebue	Zona H. Hogan
Clara J. Walker	Kotzebue	Clara J. Walker
Lloyd R. Walker	Kotzebue	Lloyd Walker Jr.
Melaine Duckworth	PO Box 1174	
RUTH G. ABEYKATNE	P.O. Box 1318	
Arthur Douglas Jr	B.O. Box 1028	

Name	Address	Signature
Ron Hogan	P.O. Box 193 99752	Ronald G Hogan
Grant Hildreth	P.O. Box 798 99752	[Signature]
Dolly Shields	Box 921 Kotzebue AK 99758	Dolly
Jonathan Duckworth	PO Box 1174	[Signature]
Randy Walker	P.O. Box 1245	Randy Walker
Eugene Smith	POB 115P	[Signature]
Silvano Viveros	PO Box 1128	[Signature]
SANDY HUSS	P.O. Box 277	[Signature]
ANGELA IPALOOK	PO. Box 36 Kotzebue	Angela Ipalook

18 or older

Name	Address	Signature
WILBUR E. KARMUN JR	P.O. Box 824 Kotzebue, AK 99752	Wilbur E. Karmun Jr.
Myshell M. Karmun	P.O. Box 824 Kotz, AK 99752	Myshell Karmun



Meeting Minutes					
Location:	Kotzebue, AK			Date	February 10, 2016
Subject	Maniilaq Meeting			Call-in #	
Attachments	Business Cards				
Attendees					
Name	Company	Present	Name	Company	Present
Elizabeth Pierce	Quintillion	X	Glenn Ruckhaus	Owl Ridge	X
Edith Vorderstrasse	Quintillion	X	Emmanuel Danjou	Alcatel-Lucent	X
Amyanne Pierce	Quintillion	X	Charlie Nelson	Tribal Government Administrator	X
Cyrus Harris	Beluga Commission Ice Seal Commission Migratory Bird Hunter Support - W. Arctic Caribou	X	Timothy Schuerch	President/CEO	X
Todd ?		X	Tom ?		X

Minutes
<p>Elizabeth Pierce presented the attached presentation: Comments from the presentation are below:</p> <ul style="list-style-type: none"> • Attendees would all like to be added to the Daily and weekly distribution lists • The attendees recognize that there is a need for high speed, low latency service in all of the villages to meet demands of eHealth systems • Commercial fishing begins in July and goes until the third week in August <ul style="list-style-type: none"> ○ 30 to 50 commercial fisherman participate • Kotzebue Sound Fisherman Association should be consulted regarding commercial fishing in the area • Seals arrive when salmon do • Send contact information to Charlie

Slides of Interest	
Slide Number	Concern / Interest
N/A	N/A

Action Items	
Item	Action
1	Members of Maniilaq will be added to the project distribution lists
2	Kotzebue Sound Fisherman Association should be contacted
3	Contact information should be sent to Charlie ???

Maniilaq Meeting
February 10, 2016
Quintillion

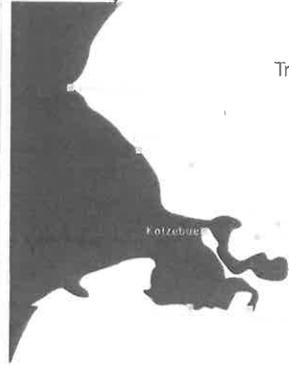


Timothy Schuerch
President/CEO



Maniilaq Association
P.O. Box 256
Kotzebue, Alaska 99752

Office: (907) 442-7677
Fax: (907) 442-7827
Cell: (907) 570-8009
E-Mail: timothy.schuerch@maniilaq.org



Charlie Nelson
Tribal Government Administrator



Maniilaq Association
P.O. Box 256 • 733 2nd Avenue
Kotzebue, Alaska 99752

Phone: (907) 442-7669
Cell: (907) 412-1188
Fax: (907) 442-7827
Email: charlie.nelson@maniilaq.org



Meeting Minutes					
Location:	NW Arctic Borough			Date	February 10, 2016
Subject	Met with Mayor's Chief of Staff and Director of Economic Development			Call-in #	
Attachments	Eugene Smith's Business Card				
Attendees					
Name	Company	Present	Name	Company	Present
Elizabeth Pierce	Quintillion	X	Glenn Ruckhaus	Owl Ridge	X
Edith Vorderstrasse	Quintillion	X	Emmanuel Danjou	Alcatel-Lucent	X
Amyanne Pierce	Quintillion	X	Eugene Smith	Chief of Staff	X
Kathy McConnell	Director of Economic Development	X			

Minutes
<ul style="list-style-type: none"> • Quintillion provides service to all providers but has no control over them • NOTAMS <ul style="list-style-type: none"> ○ The NWAB has nonconventional traffic notifications ○ Contact NAB to get VHS Notifications • A local liaison will be hired to assist in communication <ul style="list-style-type: none"> ○ Kathy McConnell can assist with candidates for the position • The mayor's office would like to know what they can do to help and insure this project happens

Slides of Interest	
Slide Number	Concern / Interest
N/A	No slides were identified in the meeting notes

Action Items	
Item	Action
1	Quintillion will contact NAB to get VHS notifications
2	Quintillion to coordinate with Kathy McConnell on candidates for local liaison

NW Arctic Borough Meeting
February 10, 2016
Quintillion



Northwest Arctic Borough

EUGENE SMITH
Chief of Staff

P.O. Box 1110
163 Lagoon Street
Kotzebue, AK 99752
www.nwabor.org
esmith@nwabor.org

1-800-478-11
Cell: 907-412-14
Phone: 907-442-251
Fax: 907-442-291



Meeting Minutes					
Location:	Nome, AK			Date	February 11, 2016
Subject	Quintillion Project Presentation			Call-in #	
Attachments	Kawerak Pamphlet provided by Kawerak				
Attendees					
Name	Company	Present	Name	Company	Present
Elizabeth Pierce	Quintillion	X	Glenn Ruckhaus	Owl Ridge	X
Edith Vorderstrasse	Quintillion	X	Emmanuel Danjou	Alcatel-Lucent	X
Amyanne Pierce	Quintillion	X			
See Attached Sign In Sheet for Kawerak Attendees and Contact Information					

Minutes
<p>Elizabeth Pierce presented the attached presentation: Comments from the presentation are below:</p> <p>Attendees questioned the route of Tokyo to London why it is part of the program</p> <ul style="list-style-type: none"> ○ Currently insufficient capacity in the US ○ The route allows for quicker installation ○ Fewer hand-offs ○ Allows traffic without going through the US (NSA) <ul style="list-style-type: none"> ● There is a possible conflict between Phase 2 of the project and the Pollock fishery ● Whaling in Nome is completed in April, there won't be any conflicts with the late June project start date. ● There is a fall whaling season for beluga ● Attendees recommended that the Alaska waterfowl co-management group be included in consultations ● Share the cable laying plan with ADNR and local mining associations so that they know where it is located and can verify there aren't any conflicts <ul style="list-style-type: none"> ○ There is a miners meeting in Nome that may be good to attend to explain QSN activities ○ Contact AMA regarding placer mining, Blake Bogart is the Section Chairman ○ Blake Bogart – bogart.w.b@gmail.com

Slides of Interest	
Slide Number	Concern / Interest
N/A	N/A

Action Items	
Item	Action
1	Quintillion coordinate meetings with local mining associations

February 11, 2016 Kawerak

Kawerak Meeting
February 11, 2016
Quintillion

Name	Company	Email
Will Gemar	Kawerak Inc	acct2@kawarek.org
Brandon Ahwasuk	Kawerak, Inc.	sub.dir@kawarek.org
Ice Seal	Committee, Alaska Migratory Bird (Co-Management Council)	
Rose Fosdick	Kawerak, Inc.	r.fosdick@kawarek.org
Roy Ashenfelter	Kawerak.	nr.advoc@kawarek.org

Our Mission: To assist, promote and provide programs and services to improve the social, economic, educational, cultural and governmental self-sufficiency for the betterment of the Native people within the region; to preserve the traditional culture, languages and values.

Our Core Purpose: To work together to achieve the highest quality of life in partnership with our tribal members and communities while living and celebrating our Native cultures.

Our Goals:

1. Strengthen culture, wellness and pride.
2. Diversify and enhance regional economies.
3. Enhance tribal and organization effectiveness.
4. Develop community infrastructure.
5. Protect, enhance and control our resources.

The Board of Directors decided when our vision was accomplished we would have strong, healthy, proud, caring, unified, pro-active, self-sufficient Native people, leaders and communities who know where we are going and who will take necessary steps to achieve it.

We will live and transmit our language and culture to our children, with councils actively governing at the local level and cooperating at the regional level to make life better for our people.

This is what being a true Inupiaq, St. Lawrence Island Yupik & Central Yup'ik means.



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1march 2014

KAWERAK, INC.

established 1973



An overview of programs
and services for the people
of the Bering Strait region.



Our Vision:

Building on the inherent strength of our cultural values, we shall assist our tribes and residents to create a positive future.

In keeping with our vision statement Kawerak is moving from a direct service provider to a provider of training and technical assistance with six divisions:

CHILDREN & FAMILY SERVICES
COMMUNITY SERVICES
EDUCATION, EMPLOYMENT & TRAINING

NATURAL RESOURCES
TRANSPORTATION
ADMINISTRATION

CHILDREN & FAMILY SERVICES DIVISION

The CFS Division provides services to address the needs of children and families. To learn more call: 907-443-4247.

Children & Family Services Program Tribal Family Coordinators within participating villages assist with ICWA cases and workers in Nome help families in identifying needs and to connect them with necessary and appropriate services to help restore and maintain family preservation. To learn more call: 800-478-5153 or 443-4352.

Child Advocacy Center operates a child-friendly, culturally-respectful place where caring professionals work together in one location, to help children and families cope with sexual abuse, severe physical abuse and exposure to violence. To learn more call: 907-443-4379.

Head Start Program is a pre-school program that promotes social competence and structure among 3 & 4 year old children. Services are provided in Nome and 12 village sites. Strong parental involvement, health and social services are primary components of Head Start's well-rounded program. To learn more call: 800-443-9050.

Wellness Program's focus is to restore a culture of wellness through promotion of healthy living, development of wellness courts, education and prevention. To learn more call: 907-443-4325.

COMMUNITY SERVICES DIVISION

The Community Services Division (CSD) provides technical assistance and services to build on tribal capacity, ensuring public safety and working with communities to improve their infrastructure, community's services, economic and social conditions. To learn more call: 877-219-2599 for all CSD Programs or 443-4246.

Tribal Affairs Program assists tribal councils in exercising self-governance and provides training and technical assistance, for 18 of the 20 federally-recognized tribes. This includes passing thru funds and helping to ensure the funds for these programs are properly maintained. Call: 907-443-4257.

Community Planning and Development Program provides training and technical assistance such as: business start-up and expansion, economic development planning, project implementation, grant writing assistance, energy planning and e-commerce support. To learn more call: 877-219-2599 or 443-4248.

Village Public Safety Officer Program provides community public safety, law enforcement, search and rescue, emergency services, probation/parole and fire fighting programs for up to 15 communities. To learn more call:443-4252.

EDUCATION, EMPLOYMENT & TRAINING DIVISION

The EET Division provides support and assistance to tribal members who are pursuing employment opportunities or who are continuing their education. Call: 800-450-4341 or 443-4358.

Child Care Services provides financial assistance for child care to tribal members who are employed, seeking work, attending training, enrolled in educational programs, or participating in treatment programs. CCS also runs the Uivilat Play & Learn Center in Nome, and provides technical assistance to home care providers in the region. To learn more call: 866-283-2273.

Community Education Program provides Adult Basic Education (ABE) services to residents throughout the Bering Strait Region. Services include remediation in reading, writing, and math, General Educational Development (GED) preparation and guidance to students enrolled and English as a Second Language (ESL) to the immigrant population in Nome. We also administer the Test of Adult Basic Education (TABE) by appointment. Our staff is located at the UAF Northwest Campus in Nome. To learn more call toll free: 800-478-7574 or (907)443-4467/4468/4469/4470.

Employment and Training Program services include career development, employability skills, and subsidized work activities for youth, grants for tribal members attending training programs and college, financial assistance for persons who have obtained or are seeking work, and Tribal Employment Rights Ordinance (TERO) advocacy. Village-based training programs are also offered throughout the Bering Strait region as funding permits. To learn more call: 800-450-4341 or 443-4358.

Tribal Welfare Assistance Department has three Welfare assistance programs which include: General Assistance-food clothing & shelter; Burial Assistance-assists in purchasing a casket; Emergency Assistance which helps during a flood/fire damage, those who have suffered damage to personal possessions. We provide temporary assistance to income-eligible tribal members who reside in one of our service areas. Call 1.800.478.5230 or 443.4370 for more info.

Vocational Rehabilitation Program provides vocational guidance and services to individuals who have disabilities that are barriers to employment. Services to eligible participants may include, but are not limited to, specialized training or education to improve job-related skills, assistive technology and/or assessments. All services are provided on an individualized basis. Call 877-759-4362 or 443-4362 for more information.

NATURAL RESOURCES DIVISION

The Natural Resources Division conducts research and provides services relating to natural resources including land, fish, land mammals, marine mammals and birds in the Bering Strait region. Through advocacy and education, they strive to protect tribal members' access to these resources and assure that future use and harvests are sustained and promoted. To learn more call: 907-443-4377.

Eskimo Heritage Program (EHP) was created in 1981. Local Native fieldworkers were hired in six communities to document and record Elders. Since the 80's, the EHP collection has increased and work continues to index, transcribe and translate files. Staff are digitizing the entire collection, to make the collection more accessible for education and public use. To learn more call: 907-443-4386.

Eskimo Walrus Commission - Created in 1978 by Kawerak, the Eskimo Walrus Commission (EWC) represents Alaska's coastal walrus hunting communities from Barrow to Dillingham. EWC works on resource co-management issues. Walrus is a primary resource for Alaska Natives, providing meat for sustenance; ivory and bone for handcrafts/artwork and the hide is used to make skin boats. To learn more call: 877-277-4392 or 443-4380.

Land Management Services provides technical assistance to owners and heirs of Native allotments and restricted town site lots. Services include: property sales, gift deedding, leasing and permitting, contracting for BLM survey, title recovery, mortgages, BLM adjudication information, removal of restrictions, resolving trespass settlements, granting rights-of-way, probating restricted estates, wills, forestry, fire suppression and environmental consulting. To learn more call: 800-443-4316 or 443-4327.

Reindeer Herders Association provides assistance to its twenty-one members, who own reindeer herds on the Seward Peninsula, in the development of a viable reindeer industry, to enhance the economic base for rural Alaska and to improve the management of the herds. To learn more call: 907-443-4378.

Subsistence Resources Program conducts research on resources use, and advocates on behalf of subsistence users for the protection of the customary and traditional harvest of all resources. The program also provides information on subsistence uses to state and federal programs in support of proposals and projects which will result in improved management of subsistence resources. To learn more call: 907-443-4265.

Social Science staff work with communities to document local and traditional knowledge about resources, environment and culture. This program also advocates for protections of subsistence rights and for the inclusion of local and traditional knowledge in resource management and policy making. To learn more call: 907-443-4273.

TRANSPORTATION

Transportation provides comprehensive transportation services including: project planning; infrastructure coordination; construction and construction management of transportation projects. To learn more call: 907-443-4395.

ADMINISTRATION DIVISION oversees operations, develops strategic actions and works with the Kawerak Board to insure tribal input and direction to Kawerak services. The administration division supports the other five divisions of Kawerak with the following services: Accounting, Human Resources, Information Technology, Legal Services and Planning.

Beringia Center of Culture & Science coordinates traveling exhibits, cares for cultural collections and plans a future museum and cultural center to preserve, promote and celebrate the cultures of the Bering Strait Region. To learn more call: 907-443-4340

**LIST OF FEDERALLY RECOGNIZED TRIBES
IN THE BERING STRAIT REGION**

Chinik Eskimo Community (aka Golovin)	779-2214
King Island Native Community	443-5494
Native Village of Brevig Mission	642-4301
Native Village of Council	443-7649
Native Village of Diomed (aka Inalik)	686-2175
Native Village of Elim	890-3737
Native Village of Gambell	985-5346
Native Village of Koyuk	963-3651
Native Village of Mary's Igloo	642-3731
Native Village of Saint Michael	923-2304
Native Village of Savoonga	984-6414
Native Village of Shaktoolik	955-3701
Native Village of Shishmaref	649-3821
Native Village of Teller	642-3381
Native Village of Unalakleet	624-3622
Native Village of Wales	664-2185
Native Village of White Mountain	638-3651
Nome Eskimo Community	443-2246
Stebbins Community Association	934-3561
Village of Solomon	443-4985

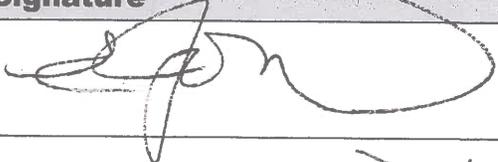
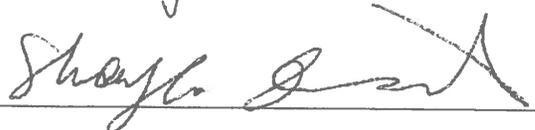


Meeting Minutes					
Location:	Nome, AK	Date	February 11, 2016		
Subject	Community Informational Meeting	Call-in #			
Attachments					
Attendees					
Name	Company	Present	Name	Company	Present
Elizabeth Pierce	Quintillion	X	Glenn Ruckhaus	Owl Ridge	X
Edith Vorderstrasse	Quintillion	X	Emmanuel Danjou	Alcatel-Lucent	X
Amyanne Pierce	Quintillion	X			
See Attached Sign In Sheet for Nome Community Attendees and Contact Information					

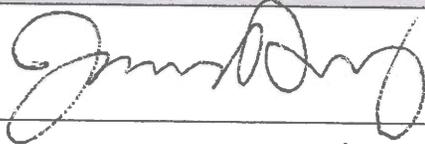
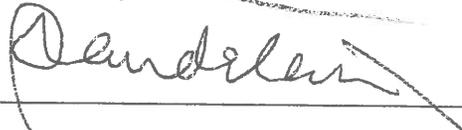
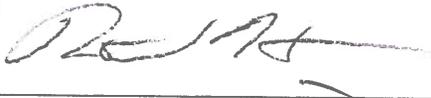
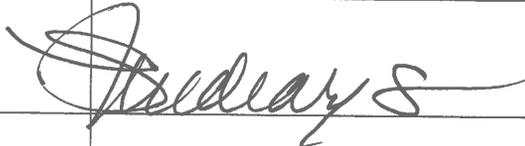
Minutes
<ul style="list-style-type: none"> • Will Fairbanks have faster internet? • What kind of on-shore work can be expected? <ul style="list-style-type: none"> ○ Roads will be torn up a little bit as is typically seen with normal utility work • The service is expected to be turned on this time next year • The attendees were concerned about commercial, cost and competition issues <ul style="list-style-type: none"> ○ Quintillion explained that if the market does not react to the new service they reserve the right to re-enter the retail market • Does the State's budget woes affect the business case for this project? <ul style="list-style-type: none"> ○ no • Phase 1-b will consist of connecting other terrestrial villages • Planning for Phase 2 is already under way

Slides of Interest	
Slide Number	Concern / Interest
N/A	N/A

Action Items	
Item	Action
1	May 6 th will be an AMA Nome branch meeting

Name	Address	Signature
Ember Johnson	201 E. 50th Ave Anchorage, AK 99518	
Shayla Dablemont	PO Box 274 Nome, AK 99762	
Ted Montgomery	PO Box 278 Nome, AK 99762	
Al Lynch	201 E 56 th Anchorage, AK 99518	
Lesli Boedigheimer	201 E 56th Ave Anch. AK 99518	
Jacob Phillips	509 E 4th Ave Apt B	
Laura Kraegel (KNOM)	105 W 3rd Ave	
Boyd McFAIL	203 W E. ST.	
Renee Bowesilla	402 N St Nome.	
Dawn Carter	280 E mtz Drive Santa Barbara Cath	

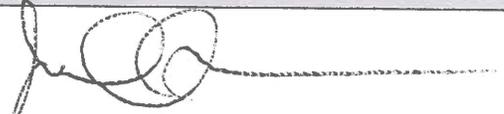
18 or older

Name	Address	Signature
Jim Dorey	Bx 333	
Blake Bogart	Box 1513	
John Handeland	POB 295	
Caroline M Brown	1276	CM3m
Robin John	Box 1002	
ROBERT HAFNER	Box 1548	
Sandra Medearis	Box 545	



18 or older

Community Update - Quintillion Subsea Cable System
Nome - Public Meeting, Thursday February 11, 2016

Name	Address	Signature
Jerald Brown	PO Box 1972	



Meeting Minutes					
Location:	Anchorage, AK			Date	February 24, 2016
Subject	Quintillion Cable Laying Project			Call-in #	
Attachments					
Attendees					
Name	Company	Present	Name	Company	Present
Glenn Ruckhaus	Owl Ridge NRC	X	Isaac Nukapiak	Kuukpik	X
Lanston Chinn	Kuukpik	X	Andy Mack	PT Capital	X

Minutes
<p>Glenn Ruckhaus had a lunch meeting with the Leadership from Kuukpik Corporation from the village of Nuiqsut: Comments from the meeting are below:</p> <ul style="list-style-type: none"> • There was concern that installation of the fiber-optic cable would interfere with the migration of white fish to the Colville Delta at a time when people are fishing • Seal hunting occurs in June and July in the Delta and out to Thetis Island • The best time for Quintillion to install the Oliktok section is the month of August • They recommend meeting with the Trilateral Committee the consist of Kuupik Corporation (Isaac Nukapiak), City of Nuiqsut (Thomas Nupagiak Jr.), and Native Village of Nuiqsut (Martha Itta) but their calendar is full through March and probably not available until sometime in April • They recommend having the fundamental business plan for delivering fiber optic to Nuiqsut firmed up before meeting with the Trilateral Commission, if they want it to go smoothly

Action Items	
Item	Action
1	N/A