

February 25, 2010

Kaja Brix
Assistant Regional Administrator
Protected Resources Division, Alaska Region
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802

Subject: Proposed Designation of Critical Habitat for Cook Inlet Beluga Whales

Dear Ms. Brix:

Chugach Electric Association, Inc. ("Chugach") submits the following comments regarding the proposed designation of 3,016 square miles of Alaska's Cook Inlet as critical habitat for the Cook Inlet population of beluga whales. These comments address the potential benefits to the species from designating critical habitat described by National Marine Fisheries Service ("NMFS") in the proposed rule, *see* 74 Fed. Reg. 63080 (Dec. 2, 2009), as well as the economic analysis NMFS prepared to satisfy requirements of ESA section 4(b)(2).

Analysis of Critical Habitat Criteria

ESA regulations (50 C.F.R. § 424.12(b)) require that areas designated as critical habitat provide "physical and biological features that are essential to the conservation" of the species, and also that those features "may require special management considerations or protection." NMFS sometimes refers to these essential habitat features as Primary Constituent Elements, or "PCEs." NMFS has applied these concepts far too broadly in proposing critical habitat for Cook Inlet beluga whales.

Three of the five features that NMFS suggests are "essential to the conservation" of belugas – unrestricted passage, water quality, and noise – are not, in fact, appropriate criteria for designation of critical habitat. The remaining two criteria – fish that are primary prey for the belugas, and the shallow waters around the mouths of major fish spawning rivers – may be essential to beluga biology, but cannot support the proposed broad designation of all of upper Cook Inlet as critical habitat.

NMFS offers no support for its conclusion that “unrestricted” passage between feeding areas is essential to Cook Inlet belugas, and so is a PCE. NMFS has cited no evidence that the existing manmade structures and current activities in Cook Inlet have any meaningful effect on the whales. The agency acknowledges that most of the movement of belugas around the Inlet relates to their pursuit of prey. 74 Fed. Reg. at 63085. NMFS has not suggested that existing structures and current activities interfere in any way with the belugas’ access to prey, or to the shallow waters around where those prey tend to congregate – or, for that matter, that they interfere in any way with the ability of the whales to transit between feeding and refuge areas.

Identifying “unrestricted passage” as an essential feature of habitat also ignores the requirement that, to qualify as critical habitat, “special management considerations or protection” be needed to preserve this feature. To the extent human activities may disrupt whale behavior, the whales already are protected from that impact by the ESA’s jeopardy standard and its prohibition on harassing endangered species. Thus, there is no additional benefit in designating areas that belugas transit in their movement between feeding areas as critical habitat.

Similarly, NMFS has suggested that water quality is a PCE for belugas. 74 Fed. Reg. at 63087. Yet NMFS also acknowledges that “Cook Inlet belugas have a lower level of contaminants stored in their bodies than other populations of belugas,” 74 Fed. Reg. at 63086, and that the existing water quality in Cook Inlet is good. In its 4(b)(2) analysis, NMFS acknowledges that water quality already is protected by the federal Clean Water Act and state water quality standards. Assessment at pp. 6-55 to 6-67. Thus, NMFS cannot credibly claim that water quality poses a threat to Cook Inlet belugas, or that critical habitat designation may be needed to protect water quality.

Finally, NMFS has suggested that underwater sound, or more precisely the absence of harmful levels of noise in the water, is a PCE. The only criterion NMFS provides for identifying harmful noise levels relates to the behavior of the whales: that the sound not be loud enough to cause them to abandon habitat. 74 Fed. Reg. at 63087. This criterion is more appropriate for application of the ESA jeopardy standard. It certainly is not a suitable measure for defining critical habitat.

NMFS apparently does not believe that the current level of sound that occurs in upper Cook Inlet as a result of routine vessel traffic exceeds its noise threshold. *See* 74 Fed. Reg. at 63087. Indeed, NMFS has not identified any specific sources of sound, or specific noise-generating activities, that it believes would exceed this behavioral criterion. Nor has NMFS explained how identification of noise as a characteristic of habitat adds any protection for Cook Inlet belugas beyond that already provided by the ESA jeopardy standard.

When the three inappropriate criteria of unrestricted passage, water quality, and noise are stripped away, NMFS cannot justify its proposed expansive designation of critical habitat for Cook Inlet beluga whales. The agency has only made the case for designation of localized areas around the mouths of major rivers, where prey fish species congregate and where belugas are routinely observed. NMFS also suggests that mudflats near the mouths of those rivers also are important refuges for belugas. 74 Fed. Reg. at 63086. While this may be true, the proposed listing does not offer any data or other support for the 5 mile radius NMFS has suggested as a boundary for this “feature” of critical habitat. Assuming NMFS is able to provide such justification; this still would only support designation of localized areas of beluga critical habitat. NMFS cannot on this basis justify designating a critical habitat area of 3,016 square miles of upper Cook Inlet.

Economic Analysis

Section 4(b)(2) of the ESA requires NMFS to consider the economic impact and other relevant impacts of designating critical habitat. To that end, NMFS has released its Section 4(b)(2) Preparatory Assessment (the “Assessment”) for public comment along with its proposed critical habitat designation. Chugach has reviewed the Assessment, and was surprised to find that its discussion of potential impacts on Cook Inlet infrastructure is limited to the direct costs of ESA consultations, and does not consider the costs of complying with regulatory measures, including mitigation. It also is limited to future projects, with no discussion of the impact of critical habitat designation on the operation and maintenance of existing facilities.

Section 6 of the Assessment discusses four proposed new projects to generate electric power. Section 7 purports to estimate the economic impact of critical habitat designation on those projects. Nowhere does the Assessment mention the existing high voltage submarine cable fields that cross Knik Arm, connecting the Anchorage area as well as the Kenai Peninsula to Chugach’s existing generation plant near the Beluga gas fields. This is particularly troubling, since in May 2009, in response to the Advanced Notice of Proposed Rulemaking regarding beluga critical habitat, Chugach provided NMFS with detailed information regarding the existence and location of the cable fields, and the potential economic consequences of delays associated with critical habitat consultations. A copy of Chugach’s prior comment letter is enclosed for your reference.

In that prior letter, Chugach spelled out for NMFS the potential economic impact of any delays in maintaining and repairing those cables. Chugach explained that these delay-related costs are in addition to any administrative costs associated with ESA consultation, and any increased costs incurred by Chugach in altering its projects to benefit the whales. The Assessment fails to include any analysis of the existing cable fields, which must be corrected before NMFS’s decision is finalized. Chugach also requests an opportunity to comment on the adequacy of that new analysis of impacts on existing facilities.

The proposed critical habitat designation also is likely to have a significant impact on exploration for and production of natural gas in the Cook Inlet region, which could directly affect the cost of electricity to Chugach's customers. Chugach generates most of its electricity from natural gas produced in the Cook Inlet region. Designating the upper half of Cook Inlet, South to below Kalgin Island, as beluga whale critical habitat sweeps in all of the existing offshore oil and gas fields in the Inlet. This is likely to have an impact on all future oil and gas exploration in the region. The Assessment contains no meaningful discussion of the impact this will have on future oil and gas exploration and development in Cook Inlet, and no discussion of the resulting impact on the cost of electricity in the Railbelt region, where most of Alaska's population is located. These economic impacts should have been part of the Assessment. When these costs are given their proper weight, it should be readily apparent that the potential benefits to the whales of an unfocused and overly broad critical habitat designation is outweighed by the resulting economic impacts.

The Assessment is further flawed in failing to consider project delays resulting from the ESA consultation process, and the attendant economic consequences. Chugach asks that NMFS consider these economic impacts before designating critical habitat, as it is required to under ESA section 4(b)(2).

Chugach also notes that the Assessment acknowledges NMFS's obligation under Executive Order 13211, regarding "Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use," to evaluate the impact of critical habitat designation on energy supply. See Assessment at p. 3-4. However, the Assessment appears to be devoid of any such analysis.

Exclusion of Cable Fields

NMFS acknowledges that it has discretion to exclude areas from critical habitat when the economic and other impacts of designating those areas exceed the benefits to the species. 74 Fed. Reg. at 63091. As explained in Chugach's prior comments, the submarine cable fields are located in areas that are only transited by belugas and not near river mouths where beluga prey congregates. The exact location of the cable fields is described in Chugach's prior comments. For reasons discussed above, the area of the cable fields should not qualify as critical habitat. If NMFS nevertheless proceeds with its critical habitat designation for all of upper Cook Inlet, it should exclude the footprint of the cable fields from that designation.

The economic impacts of delaying necessary cable field work are set out in the enclosed prior comments from Chugach. The benefits to the species of designating this area as critical habitat are minimal. There is no prey congregation near the cable fields. The cables do not have any effect on beluga transit of the area, and the work that Chugach does in the cable fields has little or no potential to disturb whales either. Further, the

existence of the cables in that location prevents construction of other in-water structures in that area.

The vessel noise associated with work in the cable fields is minimal, and similar to other routine vessel traffic in Cook Inlet. It certainly does not approach levels NMFS apparently believes would warrant habitat protection. Nor are the cables or Chugach's operations in the cable fields a significant source or potential source of water pollution.

The cable fields, and Chugach's activities in those fields, pose no meaningful threat to any of the five PCE characteristics NMFS has suggested are essential to beluga critical habitat. When NMFS balances the potential economic impacts of consultation delays, with resulting disruption in electric power supply, against the minimal potential benefits to the belugas of designating the cable fields as critical habitat, it should be readily apparent that the criteria of section 4(b)(2) are satisfied, and the cable fields should be excluded from critical habitat.

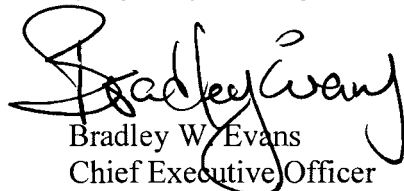
Conclusion

NMFS has not made the case for treating unrestricted passage, water quality, and underwater noise as essential features of Cook Inlet beluga whale habitat, and as a result cannot justify the sweeping declaration of more than 3000 square miles of upper Cook Inlet as critical habitat. If NMFS nevertheless does designate all or most of upper Cook Inlet as critical habitat, it should exclude the designated cable fields where the cables have been laid that connect Anchorage to its single largest source of electric power.

Please feel free to contact me if, after reviewing the information Chugach has presented and the issues it has raised, NMFS would like any additional information regarding the cable fields, Chugach's operations in the cable fields, or the impacts that could flow from disruption of those operations as a result of critical habitat designation.

Sincerely,

CHUGACH ELECTRIC ASSOCIATION, INC.



Bradley W. Evans
Chief Executive Officer

Enclosure: CEA letter to NMFS dated May 13, 2009

May 13, 2009

Chief

Protected Resources Division, Alaska Region
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802

Fax: 907-586-7557

Email: kaja.brix@noaa.gov

**Subject: Proposed Rule Making to Designate Critical Habitat for
Cook Inlet Beluga Whales**

Dear Mr.

Chugach Electric Association, Inc. ("Chugach") asks that National Marine Fisheries Service (NMFS) consider the comments presented in this letter as it decides on the designation of critical habitat for the Beluga Whales in the Cook Inlet.

Critical habitat is supposed to represent essential physical or biological features for the species. As NMFS's advanced notice of proposed rulemaking ("ANPR") acknowledges, the Cook Inlet beluga whales may be utilizing a smaller portion of their range due to reduced numbers than they used historically. 74 Fed. Reg. 17131, 17132 (April 14, 2009). That does not mean other areas of Cook Inlet that are not currently utilized by the belugas, but have been used in the past, are not suitable whale habitat, nor that the areas they currently use are more valuable to the species than other areas of Cook Inlet. Indeed, the conclusion NMFS should draw from this information is that the Cook Inlet beluga whale population is not limited by the availability of habitat and that humans are not "encroaching" on habitat that the whales need to increase and thrive.

There is no evidence that human activity is limiting access of the whales to their food supply or interfering with calving or other important life history stages. There is no evidence that ongoing, longstanding human uses of Cook Inlet have any impact on the belugas. Furthermore, water quality in Cook Inlet is quite good (other than the heavy natural silt load), and contaminant levels found in the Cook Inlet beluga whales are lower than those found in similar populations elsewhere.

Critical habitat designations in upper Cook Inlet would have significant adverse impacts on the community, without providing corresponding benefits to the whales. If NMFS nevertheless determines that some areas of critical habitat should be designated to further conservation of the species, then those areas should be restricted to the areas of Cook Inlet that are truly "essential for conservation," as required by section 3(5)(A)(i) of the

Endangered Species Act and 50 CFR § 424.12(b). The information NMFS has previously generated concerning Cook Inlet Beluga whales, including the 2008 Conservation Plan, identified only one activity that is clearly location dependent: access to food – fish runs – in the areas around the mouths of the major rivers flowing into Cook Inlet. *See* 74 Fed. Reg. at 17132.

NMFS reports that calving also has been observed in some localized areas of Cook Inlet, *id.*, but this may have more to do with where the human observers were located than with the needs of the whales. NMFS acknowledges that the more focused and thorough surveys conducted by LGL, Inc. from 2005 to 2007 encountered calves in all survey locations and months (April-October), *id.*, which suggests that there are no particular areas within Cook Inlet that should be considered essential for calving or nursery habitat.

The APRN discusses NMFS's 2008 Conservation Plan, which divides all of Cook Inlet into Type 1, 2, or 3 beluga habitats. The Conservation Plan's habitat characterizations are far too broad to be of value as the agency now turns its attention to designation of ESA critical habitat. For example, the Conservation Plan's classification of "Type 1 Habitat" – all of Cook Inlet northeast of a line drawn from 3 miles southwest of the Beluga River across to Point Possession – is overly broad, and does not match up with the criteria for critical habitat under 50 CFR 424.12(b). For example, the seasonal movement of belugas appears to be influenced by food supply more than any other factor, and only small areas around the major river mouths could truly be considered essential feeding areas. The whales may be observed in other areas of Cook Inlet, but usually they are transiting such areas, rather than remaining in place. Apart from areas important for the beluga's food supply, there is no indication that other areas of upper Cook Inlet contain "essential features" for conservation of the whales.

There also is no history of conflict between human activities in most of Cook Inlet – such as vessel traffic, and use of shorelines – and the belugas. There are no indications that historic human uses of Cook Inlet have interfered in any way with the beluga's access to food supply or any other essential feature of their habitat, or their ability to transit between habitat areas. Accordingly, there are no special management considerations that warrant critical habitat designation; to the contrary, there is no reason to believe that designation of critical habitat would in any way enhance management of beluga habitat, nor is it needed to avoid degradation of that habitat.

More specifically, as Chugach has explained in its previous letters to your office regarding your actions on Cook Inlet beluga whales, Chugach operates two high voltage

submarine cable fields ¹, comprising three circuits, in the Knik Arm. Electric energy for the Anchorage area as well as the Kenai Peninsula is supplied via these cable circuits from Chugach's generating plant near the Beluga gas fields. Cable failures jeopardize continuity and reliability of electric energy supplies to the people in the area. It is imperative that repair or replacement of damaged cables be undertaken as soon as possible after a loss occurs. For this reason, and the further reasons provided below, Chugach requests that, if NMFS designates critical habitat for the beluga whales in upper Cook Inlet, that the agency exclude the area encompassed by these cable fields (the floor of Cook Inlet and the waters above the cable fields), as the benefits of doing so outweigh any benefit to the species of designating the cable fields as part of the beluga whale critical habitat.

Chugach has operated the cable fields since 1967 and has performed repair or installation work on 12 different occasions since then. The last circuit was installed in the summer of 1999. All activities in the submarine portion of the circuits are subject to permits from various State and Federal agencies, which we have been able to secure readily in the past. Work necessary to keep the cable circuits operational needs to be done without undue delays. Delay through a winter in repairing a single circuit would be expected to increase system operating costs by \$1,000 per day. If two of the three circuits were damaged, power transfer from the Beluga generating plant would be severely curtailed. Such curtailment exposes customers in South Central Alaska to extended power outages, which could threaten lives. Any repair delays could cost \$100,000 to \$200,000 per day for stand by plus \$20,000 to \$25,000 for higher generating expenditures in direct costs, plus unquantifiable indirect costs and risks imposed on electrical consumers. Thus, restrictions on in-water work, particularly in the summer months, can be expected to impose significant costs on Chugach as well as posing a threat to the reliability of the region's electrical system.

The possible requirement to stop water operations if a whale is sighted closer than 2,000 feet would have very negative impacts on cable laying. This activity relies on a smooth continuous movement of the laying vessel to avoid undue stress on the suspended cable. Cable laying in earlier years relied on kedging operations, which involves anchor line repositioning to allow forward movement of a "dumb" laying barge. During the anchor line reposition the laying barge is stationary and exposed to the fast tidal currents of Cook Inlet/Knik Arm. Cables suspended from the barge are subject to vibration in the strong tidal currents and will be weakened. Accidental movement of the barge during such operations has resulted in damaged cables. As a result, more recent cable laying

¹ DNR permit ADL 32149 and a map depicting the cable field area cover by DNR permit ADL 200151 are enclosed

operations have not utilized that method but instead used “free boating”, where the laying vessel moves under its own power without or with tug assist at a continuous rate across the water body. Stopping this movement because of a whale sighting could – again – result in damaged cables. Such an event could add costs in excess of \$3 million, since additional cable length is not likely to be available on site to allow a repair in the same season.

Chugach has had to work in the cable fields roughly every two to three years since their inception. Over the life of a cable field, seasonal and/or proximity related restrictions could add \$20 million to \$30 million to the already high costs of submarine cable repairs and installations. If the work required to maintain cable fields were deemed incompatible with whale use of the habitat, Chugach could attempt to remedy the loss of one or more cable fields by building overhead transmission around Knik Arm. Assuming such a transmission line could be permitted – and given Chugach’s unsuccessful attempt to route a transmission line around Knik Arm in the past, it may not be reasonable to assume permits could be obtained – the cost has been estimated at \$30 million to \$50 million.

In addition to the economic case for excluding the cable fields from critical habitat, NMFS also should consider the apparent limited value of the area crossed by the cables to the beluga whales. Whales have been observed during our submarine cable work, but appear to use the areas where the cable fields are located only for transit to river mouths or the open inlet and do not stay or concentrate in the fields. While we have not conducted studies specifically directed at the impacts of submarine cables on beluga whales, we are not aware of any ill effects the installation and/or operation of the cable circuits have had on the beluga whale population. Accordingly, if NMFS does designate critical habitat for beluga whales in upper Cook Inlet, Chugach encourages NMFS to exclude the existing cable field areas from that designation.

Chugach also uses barges and/or landing craft to transport equipment and supplies from Anchorage or Nikiski to its Beluga Power Plant near Tyonek. It is the largest generating plant serving the Railbelt communities of Alaska. A small gravel barge landing on the western shore of Cook Inlet is used for loading and unloading. Chugach has conducted annual barge operations in this area since the construction of the original plant building in 1966. This barge activity is critical to plant operation because it is the only reliable method to transport large parts, heavy equipment, and industrial chemicals which cannot be flown on aircraft. Barge activities typically occur between May and October each year. The inability to barge supplies and equipment could result in the inability to generate electric power at the plant, with substantial resulting consequences for the Railbelt communities. Similarly Chugach uses barge transport between the Port of

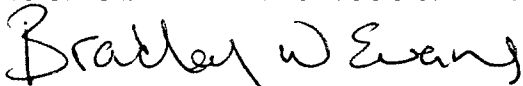
Anchorage and our Pt. MacKenzie Substation to transfer equipment. Pt. MacKenzie Substation has no road access.

Whales have been observed during barge operations, but appear to use the area near the barge landing only for transit to river mouths or the open inlets and do not stay or concentrate in the area. While we have not conducted studies specifically directed at the impacts of barge activities on beluga whales, we are not aware of any ill effects the barge activities have had on the beluga whale population. Accordingly, if NMFS does designate critical habitat for beluga whales in upper Cook Inlet, Chugach encourages NMFS to exclude the existing barge landing from that designation.

Thank you for considering these comments. Please let us know if there is any additional information regarding the cable fields or any of the other matters discussed in this letter that Chugach could provide to assist NMFS in reaching its decision.

Sincerely,

CHUGACH ELECTRIC ASSOCIATION, INC.



Bradley W. Evans
Chief Executive Officer

Attachments

28471

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF LANDS

Form No. DL 72

ADL No. 32149

RIGHT-OF-WAY PERMIT

THIS AGREEMENT made and entered into this 23 day of December, 1969, by and between the STATE OF ALASKA, acting by and through the Department of Natural Resources, Division of Lands, hereinafter referred to as the grantor and Chugach Electric Association, Inc hereinafter referred to as the permittee.

WITNESSETH, that in accordance with the provisions of Sec. 38.05.330, A.S. and the rules and regulations promulgated thereunder, the permittee having filed an application for a right-of-way for: A 138 KV submarine electric cable

with the Division of Lands together with a map showing the definite location thereon of the line of right-of-way which the permittee has adopted and agrees to be the specific and definite location of the aforesaid right-of-way, and

WHEREAS, it is understood and agreed by the permittee herein that, as a condition to the granting of the right-of-way applied for, the land covered by said right-of-way shall be used for no purpose other than the location, construction, operation and maintenance of the said right-of-way over and across the following described State lands, to wit:

Beginning at the point where the N-S 1/4 section line of Section 5, T13N, R4W, S. M. Alaska, intersects Knik Arm, thence, as shown on the submitted as-built drawing, South to a point on the S-E 16th line of Section 20, T13N, R4W, S. M. Alaska, near Point Woronzof.

running 3.5 miles ~~feet~~ in length and/or containing _____ acres, more or less and shall extend a width of 600 feet on either side of the center line of said location.

TO HAVE AND TO HOLD the same until the above described land shall no longer be used for the above-mentioned purpose and subject to conditions and reservations elsewhere set forth herein.

The sketch map revealing the right-of-way granted herein shall be attached hereto and made a part hereof.

In the event that the right-of-way herein granted shall in any manner conflict with or overlap a previously granted right-of-way the permittee herein shall use this right-of-way in such a manner as not to interfere with the peaceful use and enjoyment of the previously issued right-of-way and no improvements shall be constructed by the permittee herein upon the overlapping area unless the consent therefor has first been obtained from the permittee under the pre-existing right-of-way.

The permittee in the exercise of the rights and privileges granted by this indenture shall comply with all regulations now in effect or as hereafter

Sheet 3 of 5
Bellevue Project
Rathbun 5-9-69

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indenture shall comply with all regulations now in effect or as hereafter established by the Division of Lands and all other Federal, State or municipal laws, regulations or ordinances applicable to the area herein granted.

Upon abandonment, termination, revocation or cancellation of this indenture, the permittee shall within 90 days remove all structures and improvements from the area herein granted, except those owned by the grantor, and shall restore the area to the same or similar condition as the same was upon the issuance of this permit. Should the permittee fail or refuse to remove said structures or improvements, within the time allotted, they shall revert to and become the property of the grantor. However, the permittee shall not be relieved of the cost of the removal of the structures, improvements and/or the cost of restoring the area. Provided further, however, that the grantor, in his discretion, may alter or modify the requirements contained in this provision if it is to the best interest of Alaska to do so.

The permittee shall utilize the lands herein granted consistent with the purposes of the proposed use, as revealed by the application therefor, and shall maintain the premises in a neat and orderly manner and shall adopt and apply such safety measures as shall be necessary, proper and prudent with respect to the use to which the land is subjected.

The permittee shall take all reasonable precaution to prevent and suppress brush and forest fires. No material shall be disposed of by burning in open fire during the closed season unless a permit therefor has first been obtained from the agency empowered by law to issue such permits.

Prior to any construction or development that will use, divert, obstruct, pollute or utilize any of the waters of the State, the permittee shall first obtain approval therefor from the Commissioner of the Department of Fish and Game and file an image copy thereof with the grantor.

Any lands included in this permit which are sold under a contract to purchase shall be subject to this permit. Upon issuance of title to the purchaser, this permit shall remain in effect until its date of expiration.

In case the necessity for the right-of-way shall no longer exist, or the permittee should abandon or fail to use the same, then this permit shall terminate.

The State of Alaska shall be forever wholly absolved from any liability for damages which might result to the permittee herein on account of this permit having been cancelled, forfeited, or terminated prior to the expiration of the full time for which it was issued.

NOW THEREFOR, in accordance with the provisions of Sec. 38.05.330, A.S. and the rules and regulations promulgated thereunder and in accordance with the conditions heretofore set forth or attached hereto and made a part hereof, the permittee herein is hereby authorized to locate, construct, operate and maintain said right-of-way over and across the lands herein described.

IN WITNESS WHEREOF, the said grantor has caused these presents to be signed in duplicate and the permittee herein has hereunto affixed his signature on the

IN WITNESS WHEREOF, the said grantor has caused these presents to be signed in duplicate and the permittee herein has hereunto affixed his signature on the day and year first above written.

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES

By: [Signature]
XXXXXXXXX, Division of Lands, Chief
Water Resources Section

Chugach Electric Association, Inc.

[Signature]
Permittee
L. J. Schultz, General Manager

UNITED STATES OF AMERICA)
State of Alaska) ss.

This is to certify that on the 15 day of January, 1970, before me, the undersigned Notary Public, personally appeared Edward J. Grey known to me and know by me to be the Chief Water Res. Sec. of the Division of Lands of the Department of Natural Resources, and acknowledged to me that he executed the foregoing instrument for and on behalf of said State, freely and voluntarily and for the use and purposes therein set forth.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

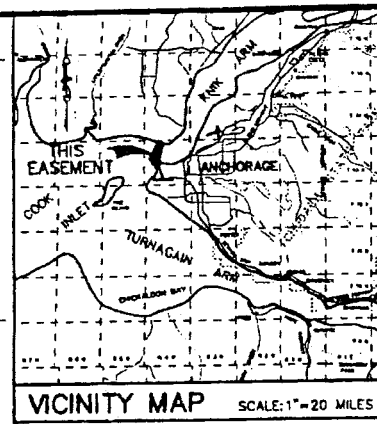
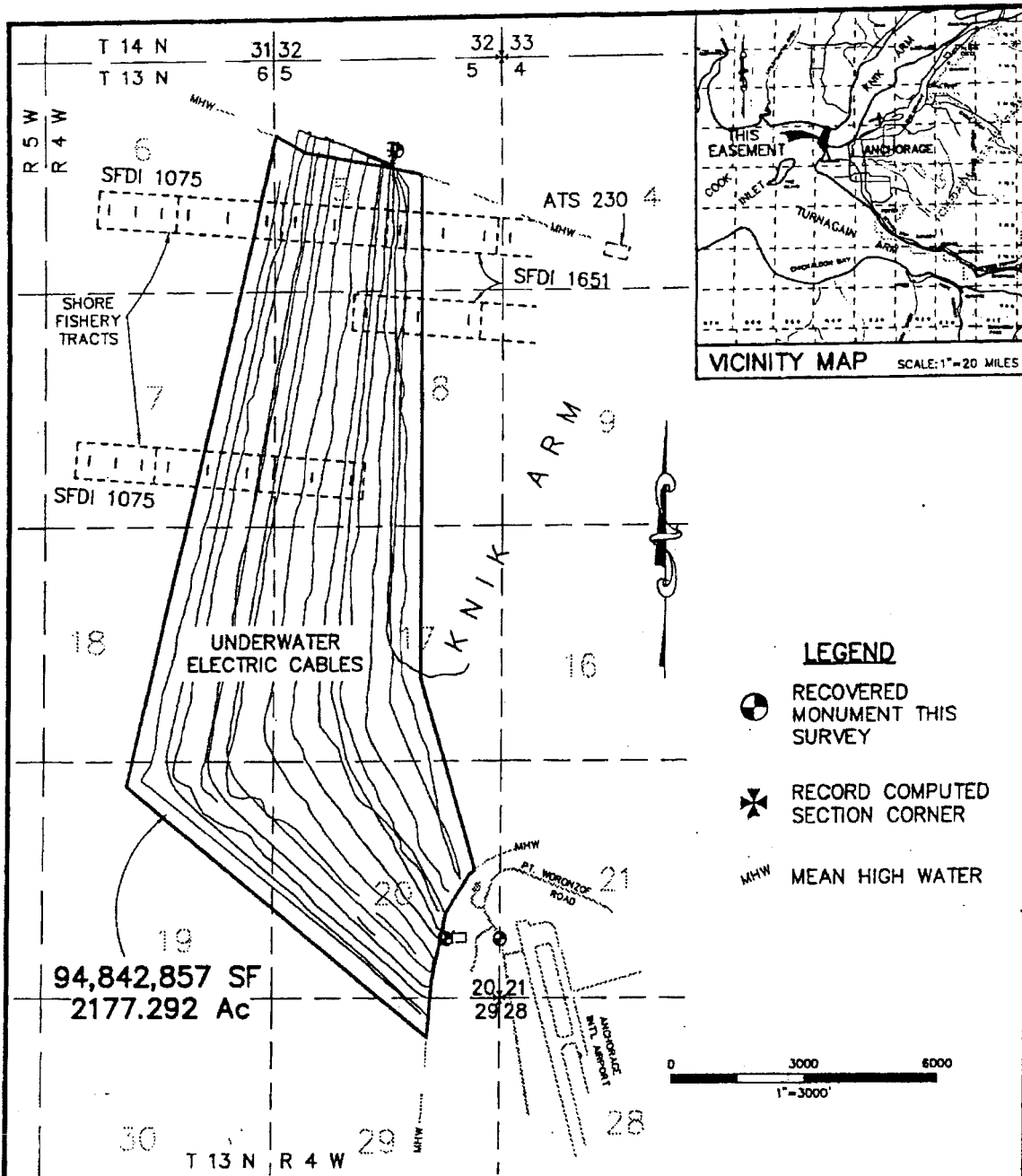
[Signature]
Notary Public in and for the State of
Alaska
My commission expires 3-29-71



UNITED STATE OF AMERICA)
State of Alaska) ss.

This is to certify that on this 8th day of JANUARY, 1970, before me, the undersigned, a Notary Public in and for Alaska duly commissioned and sworn, personally appeared L. J. SCHULTZ to me personally known to be one of the persons described in and who executed the within instrument and the said L. J. SCHULTZ acknowledged to me that he signed and executed the same freely and voluntarily for the uses and purposes therein mentioned.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

[Signature]
Notary Public in and for the State of
Alaska
My commission expires January 17, 1970



- LEGEND**
-  RECOVERED MONUMENT THIS SURVEY
 -  RECORD COMPUTED SECTION CORNER
 - MHW MEAN HIGH WATER

94,842,857 SF
2177.292 Ac

I hereby certify that I am properly registered and licensed to practice Land Surveying in the State of Alaska, that this as-built represents a survey made by me or under my direct supervision, that the monuments shown hereon actually exist as described, and that all dimensions and other details are correct.

Date: 8/15/00 Reg. No. 6714-S



ASBUILT OF EASEMENT WITH UNDERWATER ELECTRIC CABLES EXHIBIT "A"

PREPARED BY DOWL ENGINEERS	DATE OF SURVEY 12/89 & 3/90 DOWL FB 1004	PREPARED FOR CHUGACH ELECTRIC ASSOCIATION	SECTION TOWNSHIP RANGE 5, 6, 7, 8, 17, 18, 19, 20 & 29 13N 4W	LEGAL DESCRIPTION SEWARD MERIDIAN
SCALE AS SHOWN	SHEET 1 of 6	NUMBER	ADL NUMBER 32149	

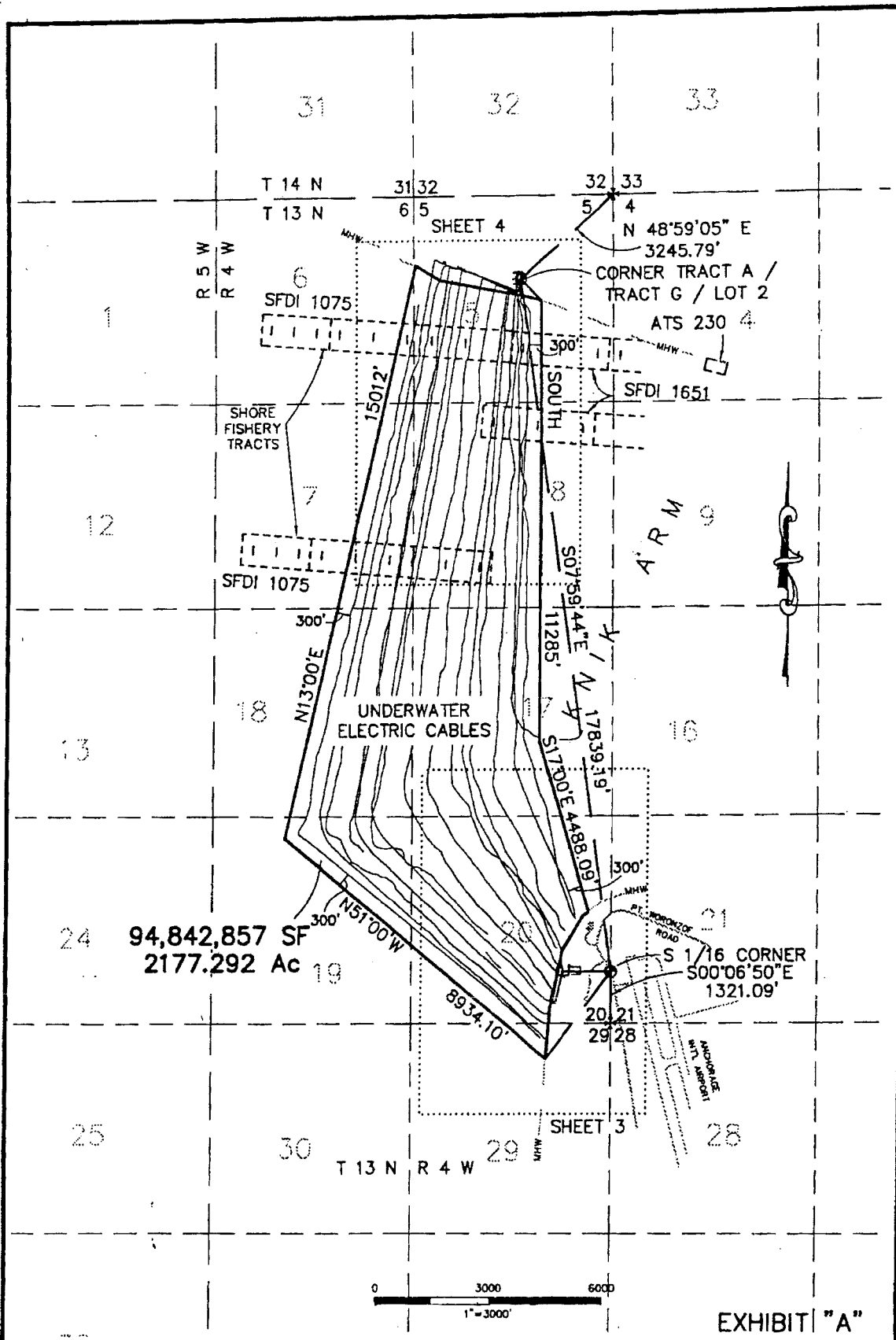
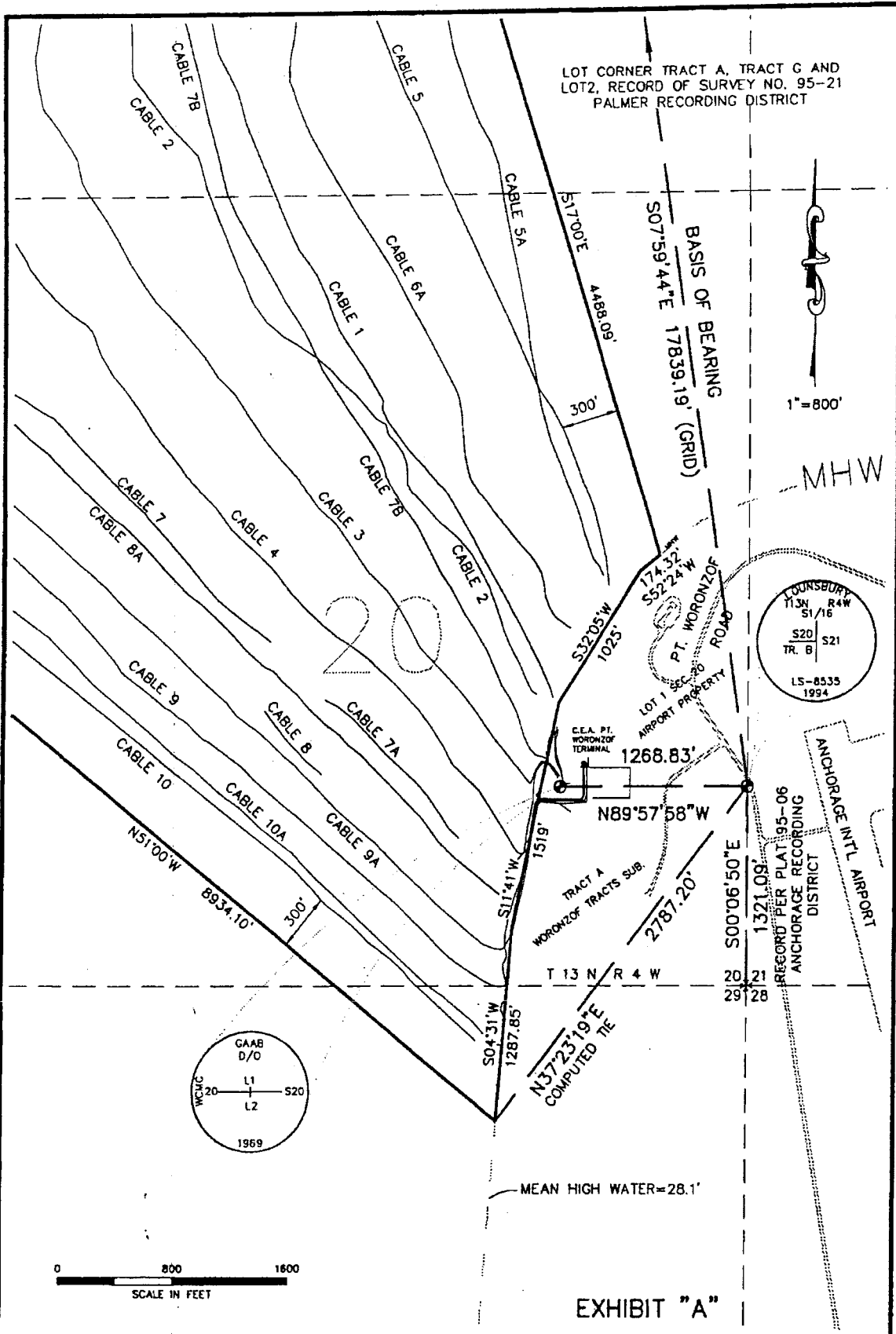
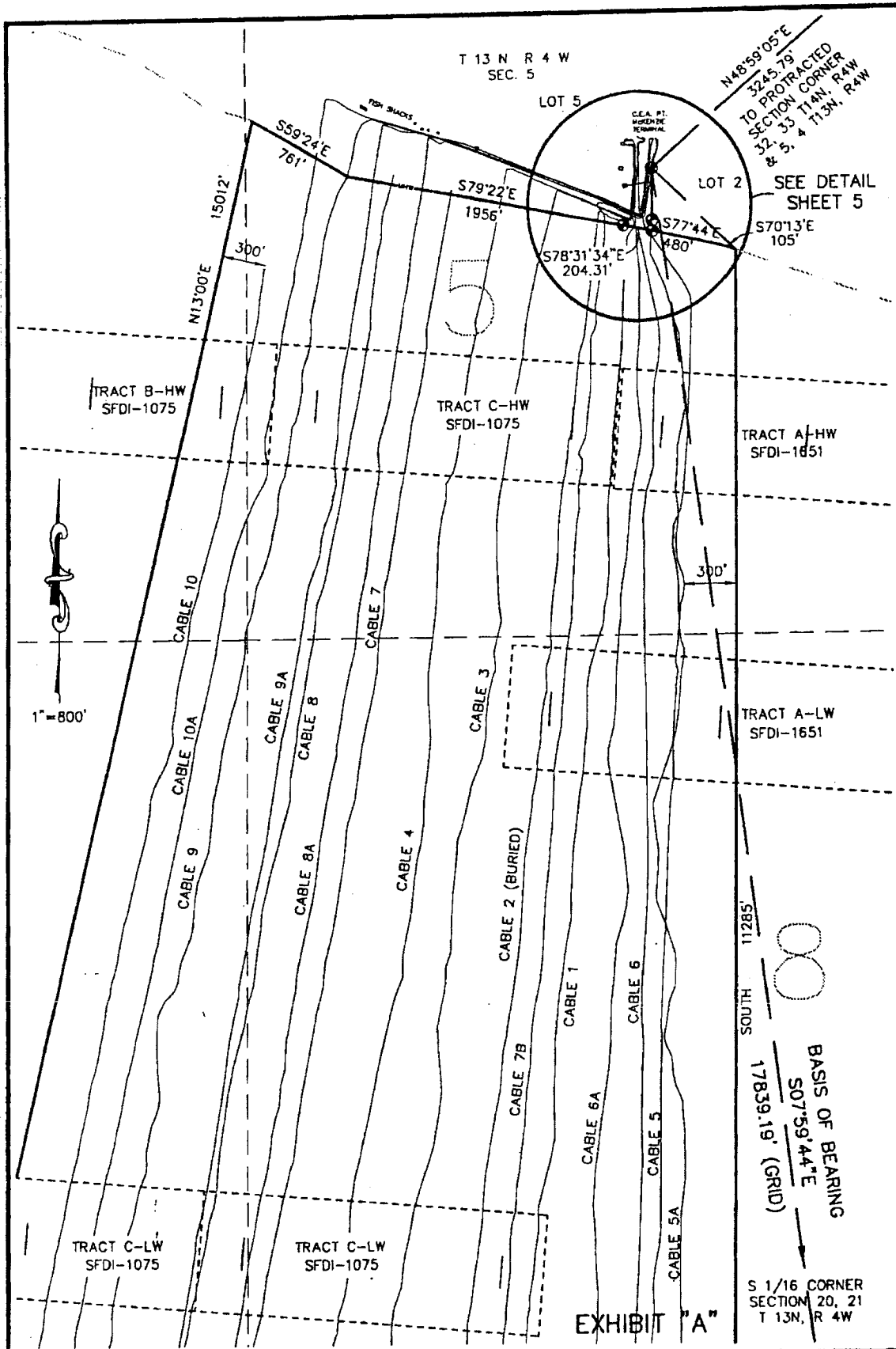


EXHIBIT "A"

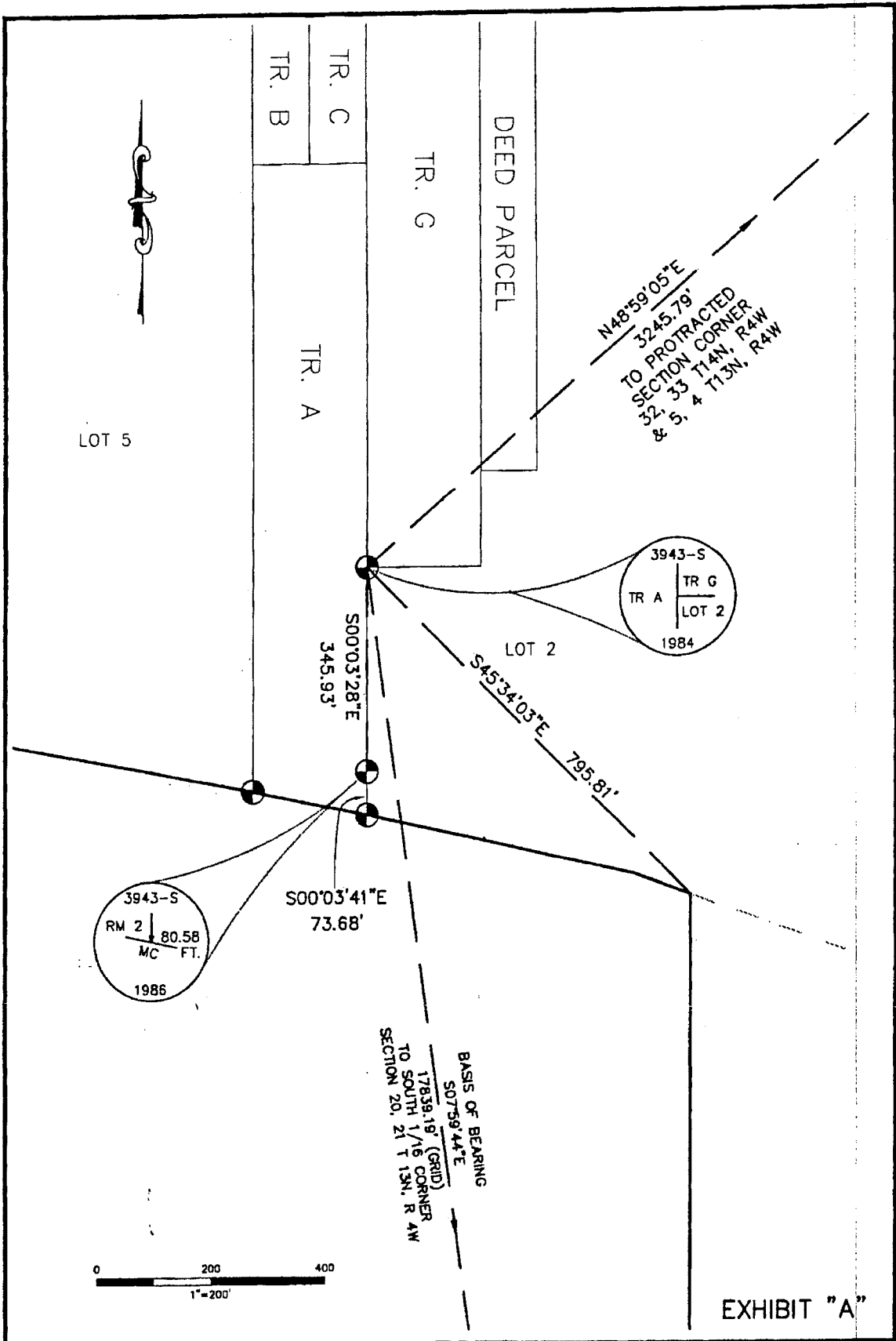
PREPARED BY DOWL ENGINEERS	DATE OF SURVEY 12/89 & 3/90 DOWL FB 1004	PREPARED FOR CHUGACH ELECTRIC ASSOCIATION	SECTION TOWNSHIP RANGE	LEGAL DESCRIPTION 5,6,7,8,17,18,19,20 & 29 13N 4W SEWARD MERIDIAN
SCALE AS SHOWN	SHEET 2 of 6	NUMBER	ADL NUMBER 32149	



PREPARED BY DOWL ENGINEERS	DATE OF SURVEY 12/89 & 3/90 DOWL FB 1004	PREPARED FOR CHUGACH ELECTRIC ASSOCIATION	SECTION TOWNSHIP RANGE	LEGAL DESCRIPTION 5,6,7,8,17,18,19,20 & 29 13N 4W SEWARD MERIDIAN
SCALE AS SHOWN	SHEET 3 of 6	NUMBER	ADL NUMBER 32149	



PREPARED BY DOWL ENGINEERS	DATE OF SURVEY 12/89 & 3/90 <small>DOWL FB 1004</small>	PREPARED FOR CHUGACH ELECTRIC ASSOCIATION	SECTION TOWNSHIP RANGE	LEGAL DESCRIPTION 5,6,7,8,17,18,19,20 & 29 13N 4W SEWARD MERIDIAN
SCALE AS SHOWN	SHEET 4 of 6	NUMBER	ADL NUMBER 32149	



PREPARED BY DOWL ENGINEERS	DATE OF SURVEY 12/89 & 3/90 DOWL FB 1004	PREPARED FOR CHUGACH ELECTRIC ASSOCIATION	SECTION TOWNSHIP RANGE	LEGAL DESCRIPTION 5,6,7,8,17,18,19,20 & 29 13N 4W SEWARD MERIDIAN
SCALE 1"=200'	SHEET 5 of 6	NUMBER	AOL NUMBER 32149	

GENERAL NOTES FOR ADL 32149

1. This represents a post-construction survey of ADL 32149 and is intended to depict that portion of the permit as it pertains to State land. It is not to be presumed to plat or dedicate those portions pertaining to non-State lands. This is not to be used to reestablish property boundaries and except as indicated, no encroachments exist in the permitted area.
2. Coordinates are Alaska State Plane Zone 4 NAD83 and are based on GPS observations taken on June 30, 2000.
3. The Basis of Bearings is the line between the corner for Tract A, Tract G, and Lot 2, Record of Survey No. 95-21 filed in the Palmer Recording District, Third Judicial District, State of Alaska, and the South 1/16 corner for Sections 20 and 21, Township 13 North, Range 4 West of the Seward Meridian, Alaska. The GRID bearing of this line is S07°59'44"E. Other Bearings are true as related to the Basis of Bearing.
4. This easement contains 94,842,857 square feet, being 2,177.292 acres. Area computations are based on the Mean High Water line depicted hereon but it should be understood that actual Mean High Water is not a fixed line.
5. The easement extends from Mean High Water at Point Wornzof to Mean High Water at Point McKenzie and passes through the Anchorage Coastal Refuge within Sections 20 and 29.
6. The Mean High Water line and underwater cable locations shown hereon were taken from surveys supplied by Chugach Electric Association, Inc. and performed by Jacobson Brothers, Inc. and Besse Epps & Potts.
7. Buried cables near the shoreline were located by Chugach Electric Association, Inc. employees and were surveyed by DOWL Engineers during December, 1989 and March, 1990.
8. Linear footage of each cable is approximate and is measured from Mean High Water at Point Wornzof to Mean High Water at Point McKenzie.

UNDERWATER CABLE LENGTHS Mean High Tide to Mean High Tide	
Cable No.	Length (feet)
1	17392
2	17800
3	18780
4	20105
5	16456
5A	16291
6	12980*
6A	16898
7	17432*
7A	1318*
7B	17849
8	15497*
8A	20879
9	22058
9A	22509
10	23211
10A	22501

* INCOMPLETE - LOCATION/LENGTH OF TOTAL CABLE NOT AVAILABLE

EXHIBIT "A"

PREPARED BY DOWL ENGINEERS	DATE OF SURVEY 12/89 & 3/90 <small>DOWL FB 1004</small>	PREPARED FOR CHUGACH ELECTRIC ASSOCIATION	SECTION TOWNSHIP RANGE	LEGAL DESCRIPTION 5,6,7,8,17,18,19,20 & 29 13N 4W SEWARD MERIDIAN
SCALE AS SHOWN			SHEET 6 of 6	ADL NUMBER 32149

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2007-016173-0

Recording Dist: 301 - Anchorage
3/16/2007 10:16 AM Pages: 1 of 11



CC

STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF MINING, LAND AND WATER
SOUTHCENTRAL REGION

ADL 200151
PUBLIC UTILITY EASEMENT
AS 38.05.850
11 AAC 51

THIS EASEMENT is granted this 15th day of March 200~~6~~⁷, by the STATE OF ALASKA, acting by and through the Department of Natural Resources, Division of Mining, Land and Water, hereinafter referred to as the grantor, whose address is 550 W. 7th Avenue, Suite 900 C, Anchorage, AK. 99501-3577 and Chugach Electric Association whose address is PO Box 196300, Anchorage, Alaska 99519-6300 hereinafter referred to as the grantee.

IN accordance with the provisions of AS 38.05.850, and the rules and regulations promulgated thereunder, the grantee having filed an application for a public easement the grantor hereby reserves a public utility easement for utilities over and across the following described State land within the Anchorage Recording District as shown on the Location Map (prepared on October 27, 2000 by Stanley Ponsness) identified, as Exhibit "A" revealing the easement granted herein and the Stipulations shall be attached hereto and made a part hereof.

WHEREAS, it is understood and agreed that, as a condition to the granting of the easement the land covered by said easement shall be used for no purpose other than the location, construction, operation and maintenance of said easement over and across the following described state lands, to wit: within portions of Section 13, Township 14 North, Range 4 West, Seward Meridian, Alaska, and Sections 8, 9, 16, 17, and 18, Township 14 North, Range 3 West, Seward Meridian running 16,375 feet in average length and containing 899.41 acres, more or less and shall extend a width of 2,500 feet.

To have and to hold the same until the above described land shall no longer be used for the above-mentioned purpose and subject to conditions and reservations of this document and attached Stipulations.

In the event that the easement herein granted shall in any manner conflict with or overlap a previously granted easement or right of way the grantee herein shall use this easement in such a manner as not to interfere with the peaceful use and enjoyment of the previously issued easement or right of way and no improvements shall be constructed herein upon the overlapping area unless the consent therefore has first been obtained from the grantees under the pre-existing easement or right of way.

The grantee in the exercise of the rights and privileges granted by his indenture shall comply with all regulations now in effect or as hereafter established by the Division of Mining, Land and Water, and all other federal, state or local laws, regulations or ordinances applicable to the area herein granted.

Prior to any construction or development that will use, divert, obstruct, pollute or utilize any of the waters of the state, the entyperson shall first obtain approval therefore from the Director of the Office of Habitat Management and Permitting and file an image copy thereof with the grantor.

The grantee shall utilize the lands herein granted consistent with the purposes of the proposed use, as revealed by the

application therefore, and shall maintain the premises in a neat and orderly manner and shall adopt and apply such safety measures as shall be necessary, proper and prudent with respect to the use to which the land is subjected.

The grantee shall take all reasonable precaution to prevent and suppress brush and forest fires. No material shall be disposed of by burning in open fire during the closed season unless a easement therefore has first been obtained from the agency empowered by law to issue such permits.

Any lands included in this easement which are sold under a contract to purchase shall be subject to this easement. Upon issuance of title to the purchaser, this easement shall remain in effect until its date of expiration.

The State of Alaska shall be forever wholly absolved from any liability for damages which might result if this easement is canceled, forfeited or terminated.

Upon abandonment, termination, revocation or cancellation of this indenture, the grantee shall within 90 days remove all structures and improvements from the area herein granted, except those owned by the grantor, and shall restore the area to the same or similar condition as the same was upon the issuance of this easement. Should the grantee fail or refuse to remove said structures or improvements, within the time allotted, they shall revert to and become the property of the grantor. However, the grantee shall not be relieved of the cost of the removal of the structures, improvements and/or the cost of restoring the area. Provided further, however, that the grantor, in his discretion, may alter or modify the requirements contained in this provision if it is to the best interest of Alaska to do so.

In case the necessity for the easement shall no longer exist, or the grantee should abandon or fail to use the same, this easement shall terminate.

NOW THEREFORE, in accordance with the provisions of AS 38.05.850 and the rules and regulations promulgated thereunder and in accordance with the conditions of this easement including all attachments and documents that are incorporated by reference, the grantee is authorized to locate, construct, operate and maintain said easement over and across lands herein described.

IN WITNESS WHEREOF, the said grantor has signed these presents to be signed in duplicate and the grantee herein has hereunto affixed his signature on the day and year first above written.

(Signature page follows.)



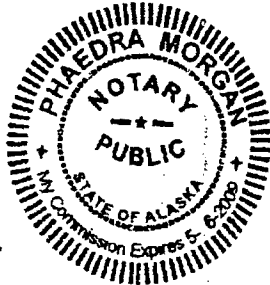
GRANTOR

[Signature]
Regional Manager, Southcentral Regional Manager
Division of Mining, Land and Water

STATE OF ALASKA)
) ss
3RD Judicial District)

THIS IS TO CERTIFY THAT ON THIS 15th day of March, 2007, before me personally appeared Clark Cox to be known and known by me to be the person named in and who executed said document and acknowledged voluntarily signing the same.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.



Phaedra Morgan
Notary Public in and for the State of Alaska
My commission expires: 5/6/09

GRANTEE

[Signature]
Name and Title Lee D. Thibert
Senior Vice President, Power Delivery
STATE OF ALASKA)

) ss
3RD Judicial District)

THIS IS TO CERTIFY THAT ON THIS 13th day of December, 2006, before me personally appeared Lee D. Thibert to be known and known by me to be the person named in and who executed said document and acknowledged voluntarily signing the same.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

[Signature]
Notary Public in and for the State of Alaska
My commission expires: 12-20-2006

ATTACHMENT A
STANDARD STIPULATIONS
ADL 200151

1. **Authorized Officer.** The Authorized Officer (AO) for the Department of Natural Resources is the Southcentral Regional Manager or designee of the Division of Mining, Land and Water. The AO may be contacted at 550 W. 7th Avenue, Suite 900 C, Anchorage, AK 99501-3577 or (907) 269-8503. The AO reserves the right to modify these stipulations or use additional stipulations as deemed necessary.
2. **Indemnification.** The grantee assumes all responsibility, risk and liability for all activities of the grantee, its employees, agents, invitees, contractors, subcontractors, or licensees directly or indirectly conducted in connection with this easement, including environmental and hazardous substance risks and liabilities, whether accruing during or after the term of this easement. The grantee shall defend, indemnify and hold harmless the State of Alaska, its employees, and agents from and against any and all suits, claims, actions, losses, costs, penalties, and damages of whatever kind or nature, including all attorney's fees and litigation costs, arising out of, in connection with, or incident to any act or omission by the grantee, its employees, agents, invitees, contractors, subcontractors, or licensees, unless sole proximate cause of the injury or damage is the negligence or willful misconduct of the State or anyone acting on the State's behalf. Within fifteen (15) days the grantee shall accept any such cause or action or proceeding upon tender by the State. This indemnification shall survive the termination of the easement.
3. **Valid Existing Rights.** This authorization is subject to all valid existing rights in and to the land under this authorization. The State of Alaska makes no representations or warranties whatsoever, either expressed or implied, as to the existence, number or nature of such valid existing rights.
4. **Reservation of Rights.**
 - a) The division reserves the right to grant additional authorizations to third parties for compatible uses on or adjacent to the land under this authorization.
 - b) The division may require authorized concurrent users of state land to enter into an equitable operation or maintenance agreement.
 - c) Authorized concurrent users of state land, their agents, employees, contractors, subcontractors, and licensees shall not interfere with the operation or maintenance activities of each user.
5. **Alaska Historic Preservation Act.** The grantee shall consult the Alaska Heritage Resources Survey (907) 269-8718 so known historic, archaeological and paleontological sites may be avoided.

The Alaska Historic Preservation Act (AS 41.35.200) prohibits the appropriation, excavation, removal, injury, or destruction of any state-owned historic, prehistoric (paleontological) or archaeological site without a permit from the commissioner. Should any sites be discovered during the course of field operations, activities that may damage the site will cease and the Office of History and Archaeology in the Division of Parks and Outdoor Recreation shall be notified immediately at (907) 269-8720.
6. **Termination.** This easement does not convey an interest in state land and as such is revocable immediately, with or without cause.
7. **Assignment.** This easement may be transferred or assigned with prior written approval from the Authorized Officer.



8. **Maintenance.** The State assumes no responsibility for maintenance of improvements constructed on state land nor liability for injuries or damages attributable to that construction.
9. **Destruction of Markers.** All survey monuments, witness corners, reference monuments, mining claim posts, bearing trees, and unsurveyed lease corner posts shall be protected against damage, destruction, or obliteration. The grantee shall notify the Authorized Officer of any damaged, destroyed, or obliterated markers and shall reestablish the markers at the grantee's expense in accordance with accepted survey practices of the Division.
10. **Site Maintenance.** The area subject to this authorization shall be maintained in a neat, clean and safe condition, free of any solid waste, debris or litter.
11. **Site Restoration.** The site shall be restored to a condition acceptable to the Authorized Officer.
12. **Inspection.**
 - a) Authorized representatives of the State of Alaska shall have reasonable access to the subject parcel for purposes of inspection.
 - b) The grantee may be charged fees under 11 AAC 05.010(a)(7)(M) for routine inspections of the subject parcel, inspections concerning non-compliance, and a final close-out inspection.
13. **Compliance with Governmental Requirements; Recovery of Costs.** Grantee shall, at its expense, comply with all applicable laws, regulations, rules and orders, and the requirements and stipulations included in this authorization. Grantee shall ensure compliance by its employees, agents, contractors, subcontractors, licensees, or invitees.
14. **Other Authorizations.** The issuance of this authorization does not alleviate the necessity of the grantee to obtain authorizations required by other agencies for this activity.
15. **Violations.** This authorization is revocable immediately upon violation of any of its terms, conditions, stipulations, nonpayment of fees, or upon failure to comply with any other applicable laws, statutes and regulations (federal and state). Should any unlawful discharge, leakage, spillage, emission, or pollution of any type occur due to grantee's, or its employees', agents', contractors', subcontractors', licensees', or invitees' act or omission, grantee, at its expense shall be obligated to clean the area to the reasonable satisfaction of the State of Alaska. A grantee who is charged and convicted of any violation of state hunting, trapping or fishing laws and regulations may be subject to revocation of this easement.
16. **Change of Address.** Any change of address must be submitted in writing to the Authorized Officer.
17. **Fuel and hazardous substances.** No fuel or hazardous substances are to be stored on the subject parcel. Prior written approval from the Authorized Officer is required for a change in this restriction. Such approval may include additional stipulations.
18. **Notification.** The grantee shall immediately notify DNR and DEC by phone of any unauthorized discharge of oil to water, any discharge of hazardous substances (other than oil), and any discharge of oil greater than 55 gallons on land. All fires and explosions must also be reported. The DNR 24 hour spill report number is (907) 451-2678; the Fax number is (907) 451-2751. The DEC spill report number is (800) 478-9300. DNR and DEC shall be supplied with all follow-up incident reports.



**ATTACHMENT B
SPECIAL STIPULATIONS
ADL 200151**

1. This easement is for four (4) 230 KV electrical submarine cables. If a higher voltage classification or additional cables are needed in the future, the grantee shall apply for an amended permit.

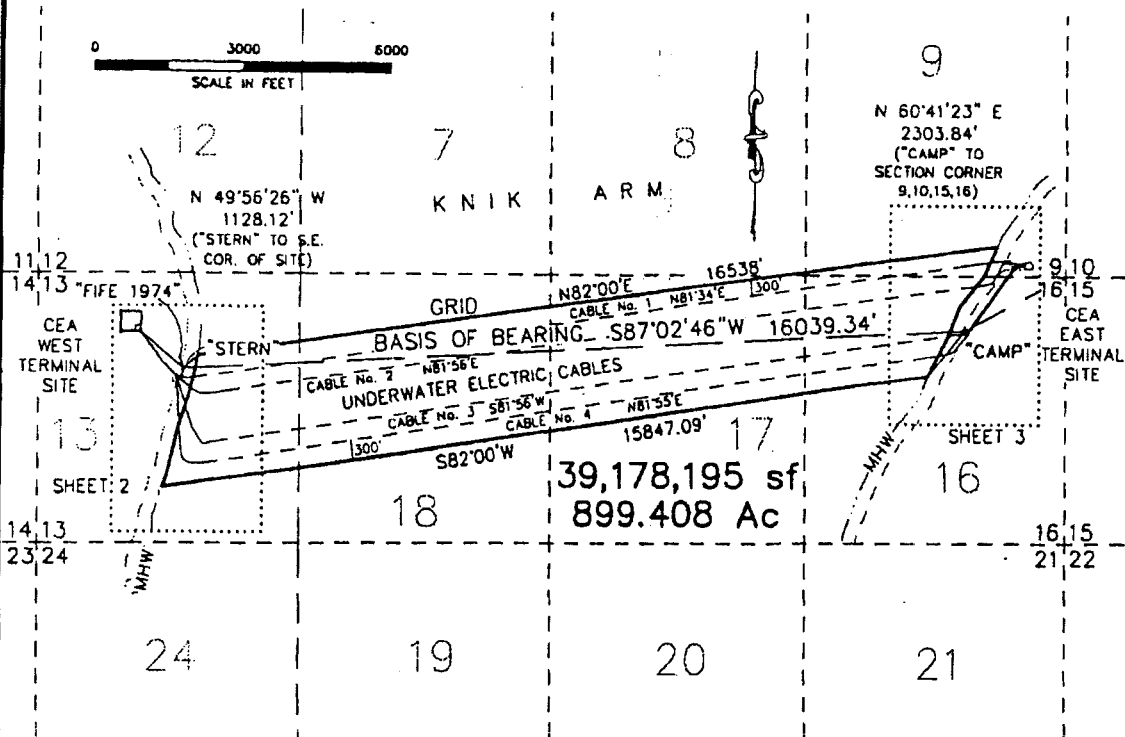
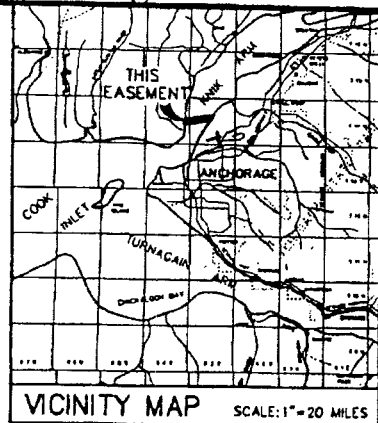


Approved for DNR

10-30-2000

Exhibit A - As-built Survey
ADL 200151
Page 1 of 4

UNDERWATER CABLE LENGTHS Mean High Tide to Mean High Tide	
Cable No.	Length (feet)
1	16531
2	16311
3	16293
4	16366



LEGEND

- ⊕ MONUMENT OF RECORD
- MONUMENT OF RECORD

I hereby certify that I am properly registered and licensed to practice Land Surveying in the State of Alaska, that this as-built represents a survey made by me or under my direct supervision, that the monuments shown hereon actually exist as described, and that all dimensions and other details are correct.

Date: _____ Reg. No. _____

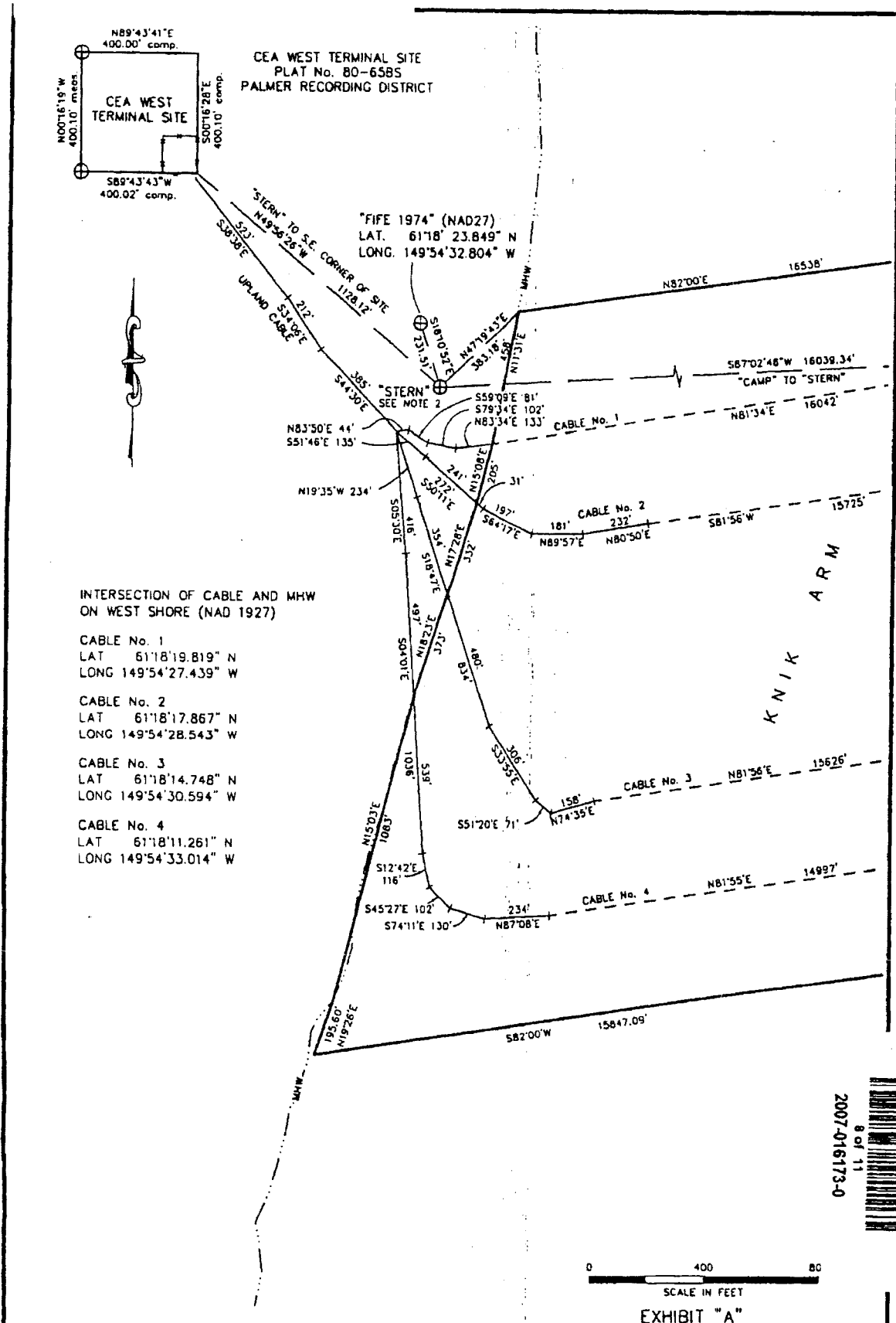


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ASBUILT OF EASEMENT WITH UNDERWATER ELECTRIC CABLES

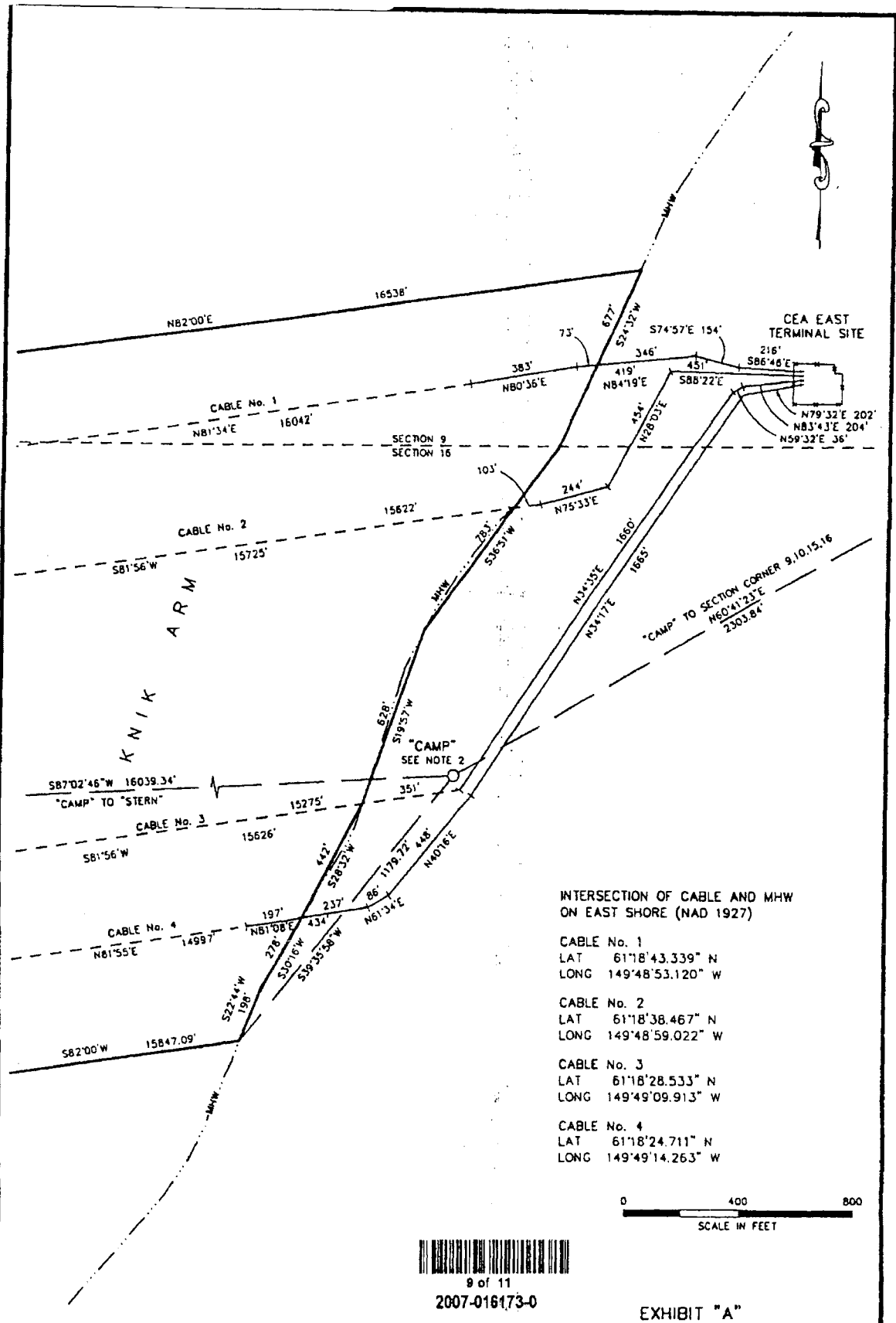
EXHIBIT "A"

PREPARED BY DOWL ENGINEERS	DATE OF SURVEY 6/89 <small>DOWL FB 1004, 1013</small>	PREPARED FOR CHUGACH ELECTRIC ASSOCIATION	SECTION 13	LEGAL DESCRIPTION 8,9,16,17 & 18
			TOWNSHIP 14N	14N
			RANGE 4W SM	3W SM
SCALE 1"=3000' (Sheet 1 of 4) 1"=100' (Sheets 2 & 3 of 4)	SHEET 1 of 4	NUMBER	ADL NUMBER 200151	



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 2007-016173-0

PREPARED BY DOWL ENGINEERS	DATE OF SURVEY 6/89 DOWL FB 1004, 1013	PREPARED FOR CHUGACH ELECTRIC ASSOCIATION	LEGAL DESCRIPTION SECTION 13 TOWNSHIP 14N RANGE 4W SM
SCALE 1" = 400'	SHEET 2 of 4	NUMBER	ADL NUMBER 200151



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 2007-016173-0

EXHIBIT "A"

PREPARED BY DOWL ENGINEERS	DATE OF SURVEY 6/89 <small>DOWL FB 1004, 1013</small>	PREPARED FOR CHUGACH ELECTRIC ASSOCIATION	SECTION TOWNSHIP RANGE	LEGAL DESCRIPTION 9 & 16 14N 3W SM
SCALE 1" = 400'	SHEET 3 of 4	NUMBER	ADL NUMBER 200151	

GENERAL NOTES FOR ADL 200151

1. This represents a post-construction survey of ADL 200151 and is intended to depict that portion of the permit as it pertains to State land. It is not to be presumed to plat or dedicate those portions pertaining to non-State lands. This is not to be used to reestablish property boundaries and except as indicated, no encroachments exist in the permitted area.
2. Coordinates are Alaska State Plane Zone 4 NAD27 and are based on Monuments "CAMP" having values of N2,670,155.76 and E532,067.71 and "STERN" having values of N2,669,329.20 and E516,049.68. These monuments are listed on an unrecorded, undated, Chugach Electric Association survey control drawing prepared by MARINAV Ltd. of London, England. Positions relate to U.S.C.&G.S. Station "FIFE 1974", and were verified by field ties this survey.
3. The Basis of Bearings is the line between Stations "CAMP" and "STERN" having a GRID Bearing of S87°02'46"W. Other bearings are true as related to the Basis of Bearings.
4. Latitude and Longitude values reported for cable intersections with Mean High Water were translated from Alaska State Plane Zone 4, NAD27 coordinates using U.S. Army Engineering Center software "CORPSCON V4.12".
5. This easement contains 39,178,195 square feet, being 899.41 acres. Area computations are based on the Mean High Water line depicted hereon but it should be understood that actual Mean High Water is not a fixed line.
6. The easement extends from Mean High Water to Mean High Water on the east and west shore of Knik Arm respectively.
7. The Mean High Water line and underwater cable locations shown hereon were taken from surveys supplied by Chugach Electric Association, Inc. and performed by Jacobson Brothers, Inc. and Besse Epps & Potts.
8. Buried cables near the shoreline were located by Chugach Electric Association, Inc. employees and were surveyed by DOWL Engineers during June, 1989.
9. Linear footage of each cable is approximate and is measured from Mean High Water to Mean High Water on the east and west shore of Knik Arm respectively.



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EXHIBIT "A"

PREPARED BY DOWL ENGINEERS	DATE OF SURVEY 6/89 <small>DOWL FB 1001, 1013</small>	PREPARED FOR CHUGACH ELECTRIC ASSOCIATION	LEGAL DESCRIPTION SECTION SE 1/4 SEC. 9 & NE 1/4 SEC. 16 TOWNSHIP 14N RANGE 3W SM		
SCALE			SHEET 4 of 4	NUMBER	ADL NUMBER 200151

RETURN RECORDED DOCUMENT TO:
Department of Natural Resources
Division of Mining, Land and Water, SCRO
550 W. 7th Avenue, Suite 900 C
Anchorage, AK 99501-3577

NO CHARGE - OFFICIAL STATE BUSINESS



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