APPENDIX Y:

Programmatic Agreement

- Draft Programmatic Agreement, April 2, 2018

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DRAFT PROGRAMMATIC AGREEMENT

By and Among
The U.S. Army Corps of Engineers,
U. S. Bureau of Land Management,
Advisory Council on Historic Preservation,
Alaska State Historic Preservation Officer,
Alaska Department of Natural Resources,
and
Donlin Gold, LLC

Regarding the
Donlin Gold Project

WHEREAS, the Alaska District, U.S. Army Corps of Engineers (USACE) receives and considers applications for permits under Section 10 of the Rivers and Harbors Act of 1899 (Section 10) (33 U.S.C. § 403) and Section 404 of the Clean Water Act (Section 404) (33 U.S.C. § 1251 et. seq.); and

WHEREAS, the USACE received a permit application pursuant to Section 10 and Section 404 from Donlin Gold, LLC (Donlin Gold) to develop and operate an open pit, hardrock gold mine located 10 miles north of the village of Crooked Creek, Alaska with related facilities located near Bethel, Jungjuk Creek on the Kuskokwim River, and extending to the Cook Inlet; and

WHEREAS, the Donlin Gold Project (Project) includes construction, operation, maintenance, and reclamation activities proposed to occur over approximately 34.5 years (if authorized), and would consist of the open pit mine, tailings storage, waste rock facility, mill, 315 mile natural gas pipeline, power plant, and transportation facilities that include an airstrip, roads, barge landing, and barge terminal; and

WHEREAS, the USACE has determined that evaluation and/or issuance of Clean Water Act Section 404 and Rivers and Harbors Act Section 10 permits for the proposed Project is an undertaking subject to review pursuant to Section 106 of the National Historic Preservation Act (NHPA) (54 U.S.C. § 306108) and under USACE's regulations at 33 CFR Part 325, Appendix C; and

WHEREAS, the U.S. Bureau of Land Management (BLM) has determined that approving the Project's natural gas pipeline and fiber optic cable to cross federal lands administered by the BLM would require authorization under Section 28 of the Mineral Leasing Act of 1920, 30 U.S.C § 185, as amended; and

WHEREAS, the BLM has determined that portions of the Project's natural gas pipeline and fiber optic cable will cross public lands administered by the BLM and that the pipeline and cable crossing public lands will require authorization under Title V of the Federal Land Policy and Management Act (FLMPA); and

WHEREAS, the BLM approvals of these project crossings in areas under its jurisdiction is a federal action associated with the undertaking that require the BLM to comply with Section 106 of the NHPA (Section 106) and 36 CFR. Part 800; and

WHEREAS, the Alaska Department of Natural Resources (DNR) has determined that approving the Donlin Gold Project on State lands administered by DNR would require a variety of land use authorizations from the department; and

WHEREAS, the DNR State Pipeline Coordinator's Section has determined that Donlin Gold's natural gas pipeline and its related facilities on State lands administered by DNR would require authorization under Alaska Statute (AS) 38.35; and

WHEREAS, Section 106 of the National Historic Preservation Act (NHPA) requires each federal agency, prior to any federal or federally assisted or funded undertaking, to take into account the effect of its proposed undertaking on any property included in or eligible for inclusion in the National Register of Historic Places (NRHP) (hereafter called historic properties); and

WHEREAS, the USACE, as the lead federal agency and in consultation with the BLM, SHPO, Alaska DNR, and Donlin Gold, LLC, has established the undertaking's Area of Potential Effects (APE), as defined in 36 CFR 800.16(d), which encompasses direct and indirect effects on historic properties for agency-permitted alternatives carried forward for detailed analysis in the Environmental Impact Statement (EIS) prepared pursuant to the National Environmental Policy Act (NEPA) (42 U.S.C 4321 et. seq.). The APE description and figures are contained in Appendix A; and

WHEREAS, cultural resources identification, evaluation, and effects assessment efforts to date are summarized in Section 3.20 of the EIS and Appendix D of this Programmatic Agreement (PA) (Cultural Resources Management Plan); and

WHEREAS, the USACE has determined that construction, operation, maintenance, and reclamation of the Project will cause adverse effects on historic properties included in or eligible for inclusion in the NRHP, or which the USACE, BLM, and SHPO agree to treat as eligible for inclusion in the NRHP; and

WHEREAS, the USACE, BLM, Alaska State Historic Preservation Officer (SHPO), and Advisory Council on Historic Preservation (ACHP) have determined that a PA for the Project is appropriate because the effects on historic properties cannot be fully determined prior to agency permit decisions and historic properties may be discovered during project implementation; and to record the terms and conditions agreed upon to resolve potential adverse effects of the Project on historic properties pursuant to 36 CFR 800.14(b); and

WHEREAS, the USACE and the BLM recognize the government-to-government obligation to consult with Native American tribes that may attach religious and cultural significance to historic properties that may be affected by the proposed undertaking and will continue to consult with such potentially affected tribes regarding their concerns under Section 106; in addition, the BLM and USACE will comply with the American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act (NAGPRA) as it applies to lands under federal control, and Executive Orders 13007 and 13175; and

WHEREAS, the USACE has invited potentially affected federally recognized Indian tribes as defined in 36 CFR 800.16(m) and listed in Appendix C1 to participate in consultation; and

WHEREAS, the USACE has invited Alaska native villages, regional corporations, and village corporations as defined in Section 3 of the Alaska Native Claims Settlement Act (43 U.S.C. § 1602) and listed in Appendix C1 to participate in consultation consistent with 36 CFR 800.16(m); and

WHEREAS, the USACE has provided Indian tribes, as well as Alaska native villages, regional corporations, and village corporations the opportunity to provide information about historic properties of concern to Indian tribes within the Project APE; and

WHEREAS, the USACE invited Indian tribes as well as Alaska native villages, regional corporations, and village corporations that participated in consultation to sign as Concurring Parties to this PA, consistent with 36 CFR §§ 800.2(c)(2) and 800.6(c)(3); and

WHEREAS, the USACE, in consultation with the BLM and SHPO, has identified representatives of local governments and other entities with jurisdiction over the area in which effects of the undertaking may occur, Tribes, landowners, and individuals and organizations with a demonstrated interest in the Project and its potential effects on historic properties, and has invited identified agencies and interested groups to participate in the development of this PA. A list of these parties is included in Appendices C2 and C3; and

WHEREAS, the Project will cause adverse effects on a minimum of seven historic properties included in or eligible for inclusion in the NRHP, or which the USACE, BLM, and SHPO agree to treat as eligible for inclusion in the NRHP, including two historic cabins (IDT-00260 and TYO-00215), the INHT, and four prehistoric occupation sites or lithic scatters (SLT-00094, IDT-00288, MCG-00071, and TYO-00277), and

WHEREAS, the Project will adversely affect the nationally significant Iditarod National Historic Trail (INHT), which was designated by the U.S. Congress under the National Trails System Act (Public Law 90-543 as amended) on non-federal lands, and the BLM is the designated trail administrator for the INHT; and

WHEREAS, the INHT comprises a corridor along the INHT primary route as represented in the adopted Interagency *Iditarod National Historic Trail Comprehensive Management Plan* of 1986; and

WHEREAS, the Project will adversely affect the nationally significant INHT on the State of Alaska owned lands, and the Alaska DNR has management responsibility of those segments of the trail; and

WHEREAS, the State of Alaska manages the INHT on State lands, and the BLM, as the trail administrator for the INHT, has cooperated with the State of Alaska to operate, develop, and maintain portions of the INHT located outside the boundaries of federally administered areas in accordance with the INHT Comprehensive Management Plan (1986) and as agreed to in the “Memorandum of Agreement Between the State of Alaska and Bureau of Land Management, U.S. Department of Interior Concerning the Iditarod National Historic Trail” (1987), and pursuant to the requirements of Public Law 90-543 (as amended); and

WHEREAS, the USACE has invited the Iditarod Historic Trail Alliance to consult on the potential for Project effects to the INHT; and

WHEREAS, in accordance with 36 CFR 800.6(a)(1), the USACE has notified the ACHP of its adverse effect determination with specified documentation, and the ACHP has chosen to participate in the consultation pursuant to 36 CFR 800.6(a)(1)(iii); and

WHEREAS, Donlin Gold, LLC has participated in consultation per 36 CFR 800.2(c)(4), and through signature to this PA, Donlin Gold, LLC, and/or its assignees agree to carry out the stipulations herein under the oversight of the USACE and is an invited signatory to this PA; and

WHEREAS, the USACE has provided the public with information about the undertaking and its potential effects on historic properties and sought public comment and input consistent with the requirements of Section 106 of the NHPA and 33 CFR Part 325; and

NOW THEREFORE, the USACE, BLM, SHPO, and ACHP (Signatories), and Alaska DNR and Donlin Gold (Invited Signatories) agree that the Project shall be implemented in accordance with the following stipulations in order to take into account the potential effects of the Project on historic properties listed on or eligible for listing to the NRHP thus satisfying the requirements of Section 106 of the NHPA.

STIPULATIONS

The USACE and the BLM, as appropriate, shall ensure that the following measures are carried out:

I. THE PROJECT

A. The proposed Project is the development of an open pit, hardrock gold mine located 10 miles north of the village of Crooked Creek in western Alaska. Major project components include excavation of an open pit mine that ultimately would be approximately 2.2 miles long by 1 mile wide by 1,850 feet deep; a tailings storage facility approximately 1 mile long, and ultimately covering approximately 2,350 acres; a waste rock facility covering approximately 2,300 acres; a mill facility processing approximately 59,000 short tons of ore per day; a natural gas-fired power plant with a total connected load of 227 MW, supplied by an approximately 315-mile, small-diameter (14-inch) natural gas pipeline from the west side of Cook Inlet to the mine site; and transportation infrastructure including a 5,000-foot airstrip, a 30-mile-long road from the mine site to a new barge landing near Jungjuk Creek on the Kuskokwim River, and barge terminal facilities in Bethel (Appendix A).

II. ADMINISTRATIVE CONSIDERATIONS

A. The USACE and the BLM may attach this PA or the stipulations listed in this legally enforceable PA to federal agency-specific permits, so that appropriate provisions of this PA and its requirements become binding on the permittee, so long as the underlying PA remains in effect for the area covered by the relevant permit. The permittee shall comply with this PA on these measures and failure to do so could result in suspension, modification, or revocation of the applicable agency's permit.

B. If the proposed Project is permitted, this PA and all of its requirements shall be binding on Donlin Gold as permittee, its successors, and assigns.

C. Because of both singular and overlapping legal authorities and responsibilities among the USACE and the BLM (agencies) regarding individual components or activities, one or more of these agencies may be responsible for ensuring that the terms of this PA are carried out for a given component or activity. For certain larger components and activities, all involved agencies may carry out the terms of this PA, so long as doing so is within the scope of their legal authorities under Section 106 of the NHPA.

D. The USACE and the BLM shall enforce the terms of this PA as is appropriate within each agency's scope with regard to permits, and other conditions that incorporate this PA and its terms. Each shall notify the other if any of them becomes aware of an instance of possible non-compliance with the terms and conditions of this PA or permit or conditions as they relate to this PA. In such case, the responsible agency shall ensure compliance consistent with its legal authorities and consult with the other signatories, as needed.

E. Historic properties, APEs, and the applicability of this PA:

1. This PA shall apply to the Donlin Gold Project and all of its components, including those not known at this time or not specified in the permits, permit applications, or other project documents so long as they are within the jurisdiction of the USACE and/or the BLM.

2. In Section IV and Appendix A of the PA, the USACE and BLM, in consultation with SHPO, have determined the APE for the Project and its components, as defined at 36 CFR 800.16(d), and pursuant to USACE jurisdictional authority for the "Permit Area" as defined at 33 CFR 325, Appendix C(1)(g).

III. ROLES AND RESPONSIBILITIES

A. The USACE will make determinations of eligibility (DOEs) and findings of effect in coordination with the BLM, and will seek SHPO concurrence consistent with the requirements of 36 CFR 800.4 and 36 CFR 800.5.

B. The USACE and BLM are responsible for consultation with Tribes, including a) identifying Tribes that attach religious and/or cultural significance to historic properties potentially affected by the Project; and b) through consultation, providing Tribes a full opportunity to express any concerns about the Project, their views on identification efforts, and NRHP eligibility of any properties to which such Tribes attach religious and cultural significance; and c) allowing Tribe(s) to express their views on the assessment of effects and resolution of adverse effects to historic properties.

C. The USACE and BLM are responsible for identifying individuals and organizations with a demonstrated or known interest and expertise in historic properties and preservation issues in the Project Area, and have notified them about the Section 106 review of the Project and the opportunity to be a consulting party to this PA. The USACE and BLM have invited such persons or organizations to participate in the Section 106 review (see Appendix C).

D. The USACE and the BLM each will ensure that requirements of this PA have been met for that part of the undertaking under their respective jurisdictions. The agencies shall coordinate consultation to ensure that each agency independently satisfies its respective regulatory requirements under 36 CFR Part 800 and 33 CFR 325 Appendix C.

E. Following consultation amongst Signatories, as described below, Donlin Gold will be responsible for funding and overseeing, either directly or through qualified consultants or contractors, work that is determined necessary to ensure compliance with Section 106 and the terms of the PA.

F. The USACE, in consultation with the consulting parties, and in coordination with Donlin Gold, shall oversee compliance with the terms of the PA and related work completed by Donlin Gold, including identification and evaluation of historic properties, records research, inventory, archaeological and above-ground surveys, assessments of effects, mitigation, pre- and post-construction data recovery, report preparation, required monitoring of construction, and curation of artifacts.

G. Donlin Gold, with oversight by the USACE, and BLM as applicable, will ensure that all such activities undertaken under this PA are conducted in a professional manner and consistent with the stipulations of this PA. The consultation process for the work noted above is described in Sections IV-XVII of this agreement document.

H. Donlin Gold or their successor, as project proponent, will ensure that persons supervising cultural resources work on their behalf hold any appropriate BLM, USACE, or State of Alaska permits and/or authorizations as appropriate for archaeological inventory and other archaeological investigations, and meet the Secretary of the Interior's Standards for Archeology and Historic Preservation (Standards and Guidelines), as well as the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) for the applicable discipline.

I. Donlin Gold or their successor, as project proponent, may apply for permits, authorizations or approvals for individual project segments, facilities, or groups or portions of segments or facilities, on a phased or segmented basis, so long as all such activities are conducted in accordance with this PA and no other law, rule or regulation precludes such phasing in the applicable permit application process.

J. Alaska DNR, as an Invited Signatory, shall have the same right to seek amendment or termination of this agreement as other signatories and invited signatories and have a consultative role as noted in this agreement.

IV. AREA OF POTENTIAL EFFECTS

A. The USACE, in consultation with the BLM, SHPO, and other consulting parties, has determined and documented the APE for the Project (see Appendix A). The USACE will also, as it deems appropriate, seek information from consulting parties and other individuals and organizations likely to have knowledge of, or concerns with, historic properties in the APE, as provided in Stipulation III.C, above.

B. The USACE will seek to gather information from Tribes to assist in identifying historic properties, including those to which each such Tribe attaches religious and cultural significance, recognizing that such Tribes may be reluctant to divulge specific information regarding the location, nature, or activities associated with such sites or properties.

C. Consistent with the confidentiality requirements in 36 CFR 800.11(c) and Section 304 of the NHPA, the USACE shall withhold from public disclosure information about the location, character, or ownership of a historic property when disclosure may cause a significant invasion of privacy, risk harm to the historic property, or impede the use of a traditional religious site by practitioners.

D. This PA addresses the following three types of effects that may be deemed to be adverse to historic properties: 1) direct effects; 2) indirect effects (e.g., visual, atmospheric, noise, vibratory); and 3) reasonably foreseeable effects that may occur later in time, be farther removed in distance, or be cumulative. The APE for the Project covers all areas where these project effects may occur.

E. For purposes of any required Section 106 review, previously unsurveyed areas added to the Project in the future, whether or not subject to additional or supplemental NEPA review, will be identified in project plans and subject to the terms of this PA. Project facilities added in the future and located on previously surveyed lands will be reviewed under the terms of this PA. The USACE, in consultation with the Signatories, will determine whether these additional facilities would require re-survey.

F. USACE may propose to enlarge or diminish the APE for a given project facility or segment as the USACE determines is reasonable and appropriate under the terms of this PA. This change shall require consultation with the Signatories to this PA, and documentation of their agreement with the change, in writing. The USACE will provide 30 calendar days prior notification of such action to consulting parties and Tribes that attach religious and cultural significance to known historic properties in the area encompassed by or excluded by the alteration of the APE.

V. IDENTIFICATION AND EVALUATION OF HISTORIC PROPERTIES AND ASSESSMENT OF EFFECTS

A. Donlin Gold has made a reasonable and good faith effort to identify and evaluate historic properties within each project component's APE.

B. Donlin Gold has conducted 10 Phase I identification survey and Phase II site evaluation studies focusing on project areas that have the potential to be directly affected by project activities, with the exception of proposed natural gas pipeline ancillary facilities for locations outside the previously surveyed 300-foot-wide corridor, and the recently identified North Route pipeline alternate. Additional archaeological survey will be conducted in accordance with this PA prior to the initiation of construction or other ground disturbing activities that have the potential to affect as yet unidentified sites within these areas or any additional project areas not yet inventoried. Reports for all previous investigations have been submitted to the USACE, BLM, and SHPO, as referenced in the Cultural Resources Management Plan (CRMP) (Appendix D). Investigations conducted to date identified a total of 72 cultural resources; 49 of those are located within the APE.

C. Of the 49 resources identified in the APE, 14 were recommended eligible to the NHRP, and 7 treated as eligible either because additional investigation is needed to determine NHRP eligibility or the determination of eligibility is pending. Donlin Gold has provided these recommendations to the USACE regarding NRHP eligibility. The USACE made determinations of eligibility for these resources and has received concurrence from the Alaska SHPO. SHPO concurrence for DOEs for

known resources was received on 5/25/2016 and 10/25/2016. Cultural resources identified after this date will need to be evaluated for NRHP eligibility.

D. As currently proposed, construction, operation, maintenance, and reclamation of the Project will cause adverse effects on a minimum of seven historic properties included in or eligible for inclusion in the NRHP, or which the USACE, BLM, and SHPO agree to treat as eligible for inclusion in the NRHP, including two historic cabins (IDT-00260 and TYO-00215), the INHT, and four prehistoric occupation sites or lithic scatters (SLT-00094, IDT-00288, MCG-00071, and TYO-00277).

E. Prior to the conclusion of identification and evaluation efforts for any particular activity zone or area not previously inventoried, Donlin Gold shall implement guidance received from the USACE, BLM, and SHPO regarding the level and scope of efforts. The level and scope of additional identification efforts shall be consistent and commensurate with the predictive models previously prepared for the Project and outlined in the reports identified in Stipulation V.B. If Donlin Gold and the agencies disagree as to what constitutes adequate identification and evaluation efforts, the federal agencies, in consultation with SHPO, shall arrive at a determination. During project construction, planning, or execution, Donlin Gold will invite local tribes to provide archaeological services within their traditional lands or cultural places located within the project region. Donlin Gold may choose to utilize qualified archaeologists provided by local tribes where necessary to either furnish or actively participate in archaeological investigations, including but not limited to: monitoring of ground disturbance areas of high potential; Phase 1 and Phase 2 cultural resource surveys; provision of training materials; or ethnographic surveys.

F. Where construction modifications consist of corridors or large land areas, Donlin Gold will use a phased process, as per 36 CFR 800.4(b)(2) to conduct further identification and evaluation. This will facilitate project modifications, and may eliminate the need to prepare complex determinations of eligibility for sites that will not be affected. Such identification efforts shall be conducted in accordance with the principles, standards, and guidelines contained in *Archeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines* (Standards and Guidelines) (48 FR 44716-44742) and follow the procedures set forth in 36 CFR 800.4. Donlin Gold shall provide the agencies with documentation of these identification and evaluation efforts and shall provide recommendations for determinations of eligibility of those properties that will be reviewed by the BLM or USACE, as appropriate, and sent to the SHPO for concurrence. No work shall be performed in areas prior to the review and approval of any identification and evaluation reports by the Signatories. This information will also be included in the annual reporting requirements described in Section XIII.

G. Any disagreements regarding NRHP eligibility will be resolved by requesting a determination of eligibility from the Keeper of the National Register, the National Park Service, in accordance with 36 CFR Part 63,

whose determination shall be final. The USACE, in consultation with SHPO and in accordance with 36 CFR 800.5, shall make an assessment of whether a component or activity may have an adverse effect on historic properties and the necessary treatment of the historic property as outlined in Stipulation VI, Treatment of Historic Properties, below. The USACE will coordinate with BLM on properties under BLM jurisdiction.

VI. TREATMENT OF HISTORIC PROPERTIES

A. Donlin Gold shall ensure, to the extent practicable, the avoidance of all known historic properties, including archaeological and historical sites, districts, historic buildings, structures, traditional cultural properties, and landscapes.

B. Because known historic properties will be adversely affected and additional resources may be identified where impacts cannot be avoided and or effects minimized, Donlin Gold has prepared a CRMP (attached as Appendix D) to guide mitigation or treatment in consultation with the USACE, BLM, DNR, SHPO, Tribes, and other affected parties. The Signatories shall also determine if additional public involvement is warranted during the preparation of the mitigation or treatment plan. The CRMP may be amended to include additional historic properties identified over the period of this agreement and adversely affected by the Project. Amending the CRMP would require following the process outlined in Stipulation XV. All discovery situations shall follow the inadvertent discovery protocols outlined below in Section VIII.

C. Mitigation of adverse effects will be required for a minimum of seven historic properties, including two historic cabins (IDT-00260 and TYO-00215), the INHT, and four prehistoric occupation sites or lithic scatters (SLT-00094, IDT-00288, MCG-00071, and TYO-00277). Additional historic properties may be located during additional inventory efforts or construction activities. All Signatory Parties agree that the following measures shall be implemented for the purposes of mitigating adverse effects to identified historic properties:

1. Phase III Excavation and Data Recovery shall be conducted at two prehistoric sites with the highest data-recovery potential (MCG-00071, TYO-00277), and two historic cabin sites (TYO-00215 and IDT-00260). Lithic materials previously collected from one lithic scatter (IDT-00288) will receive additional analysis. One prehistoric site (SLT-00094), located in close proximity to the planned Jungjuk Port site, will require further Phase II testing to better ascertain and delineate the extent of site deposits. This testing may constitute sufficient data recovery mitigation if it is determined by USACE, through consultation with SHPO, that further data recovery is not necessary.
2. Data recovery shall be implemented in compliance with the general methodology outlined in the CRMP (Appendix D). Prior to implementation, site-specific data recovery methods shall be documented in a Data Recovery Plan prepared in coordination with the USACE and BLM, and reviewed and approved by the SHPO.

D. If the property is solely archaeological in nature, mitigation or treatment may include, but not be limited to:

1. Developing community archaeology and/or cultural resource recordation programs;
2. Assisting with tribal artifacts or human remains repatriation efforts;
3. Preparation of a research design with provisions for data recovery and recordation;
4. Analysis, reporting, and curation of resulting collection and records in an institution as outlined in Stipulation XII (Collection and Curation); and
5. Data recovery (See CRMP, Section 6.4.2 Methods for Historic Sites with High Data-Recovery Potential, Section 6.4.3 Methods for Sites with High Data-Recovery Potential, Section 6.4.5 Lithic Scatters – Methods for Spatial and Laboratory Analysis, Section 6.4.4 Sites Requiring Further Phase II Testing). Archaeological recovery, analysis, and reporting shall use the Secretary of Interior's Standards and Guidelines for Archaeological Documentation (Archaeological Documentation Guidelines) (FR 48:44734-44737).

E. If the historic property is a building, structure, traditional cultural property, or landscape, the plan shall specify approaches for the mitigation or treatment of the property in accordance with the principles, standards, and guidelines contained in Standards and Guidelines (48 FR 44716-44742), the Secretary of the Interior Standards for the Treatment of Historic Properties as codified in 36 CFR Part 68, and the Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation for acceptance into the Historic American Building Survey/Historic American Engineering Record, or Historic American

Landscapes Survey. Other mitigation measures could include, but not be limited to:

1. Relocating a historic property;
2. Re-landscaping to reduce effects;
3. Public interpretation;
4. Ethnographic documentation; and
5. Prescribing use of a project component or activity in such a way as to minimize effects to historic properties, or to those concerned about the effects of that component or activity.

Methods of recordation and documentation described in the mitigation plan shall use the Standards and Guidelines (FR 48:44730-44734) or other standards in consultation amongst BLM, USACE, and SHPO. The mitigation plan will provide a schedule for when activities will occur, when deliverables will be finalized, and the dissemination of those deliverables.

VII. TREATMENT OF IDITAROD NATIONAL HISTORIC TRAIL

A. As a layered historic property, the INHT has evolved over time beginning with surviving segments of the 1910 Iditarod (Goodwin) Trail, and then later trails (e.g., Iditarod National Historic Trail and Iditarod Race Trail) in the Project APE. The cultural and recreational uses of the trail, and the impacts to them, are intertwined to the extent that the Signatories agree that the impacts to the trail and trail corridors are best addressed in a holistic fashion.

B. Identification of Adverse Effects

1. When identifying impacts to the INHT where the INHT is on State land, the Project will consider a 400 foot wide corridor (200 feet either side of the centerline). This follows the State's easement for the trail, ADL 222930. If, as the Project progresses, impacts to the INHT are identified on federal land, the Project will consider a 1000-foot-wide corridor (500 feet either side of the centerline) for the INHT Primary Route, as defined in the INHT Comprehensive Management Plan (BLM 1986). Other cultural resources associated with the INHT may lie outside of this corridor.
2. The predictive model and method used to identify and evaluate cultural resources is the same for the Project overall. Any design changes, modifications, and refinements of the undertaking shall endeavor to avoid, minimize, or mitigate adverse effects on historic properties associated with the INHT.

C. Mitigation of Adverse Effects

Mitigation of effects to the INHT or its associated resources may include:

1. For adverse visual effects to historic resources: Document the building(s) and viewshed(s) photographically before construction; collect and curate historic photographs; produce a professional report presenting this information in a historic context.

2. For adverse effects to the INHT Corridor: Video document and geo-reference trail tread and immediately adjacent corridors for the continuous length of the impacted area.
3. Additional mitigation to be determined.

VIII. PROCEDURES FOR INADVERTENT DISCOVERIES AND UNANTICIPATED EFFECTS (NOT INCLUDING HUMAN BURIALS, REMAINS, OR FUNERARY GOODS)

A. If an inadvertent discovery of potential cultural materials is made, Donlin Gold shall stop work in the immediate vicinity of the discovery and the USACE shall implement the Inadvertent Discovery Plan as contained in the CRMP (Appendix D).Donlin Gold shall proceed consistent with this plan:

1. Ensure construction activities that may affect the resource will cease without delay; work that does not affect the resource may continue.
2. Protect the discovery site against further disturbance pending the following actions.
3. Donlin Gold's field coordinator will immediately notify the environmental/regulatory manager and cultural resources specialist of the discovery.
4. The cultural resources specialist will notify the USACE, the SHPO, and appropriate landowner(s) (parties) of the discovery within one business day. The initial notification of unanticipated discoveries should include available information regarding the nature and extent of the cultural materials and the site coordinates.
5. The cultural resource specialist will evaluate the find, assess its potential significance (eligibility for the NRHP), and notify the parties as to the nature and potential significance of the discovery within 72 hours.
6. The parties shall consult, by telephone or other means, on the nature and potential significance of the discovery and whether any additional investigation is warranted. A decision shall be provided to Donlin Gold no later than within two working days following notification (A (5)).

B. If the USACE determines, in consultation with the SHPO and the landowner, that the discovery is not significant (not eligible for the NRHP) and the SHPO concurs, verbal authorization to proceed may be given by the USACE. USACE shall provide written authorization to Donlin Gold within 48 hours.

C. If the USACE determines that additional investigation is warranted (A(6)), the signatory parties will continue to consult to determine an appropriate level of effort to determine the NRHP eligibility of the discovery. If the discovery is determined to be eligible, the parties specified above in Section VIII.4 will determine whether effects to it may be avoided or minimized sufficiently to not adversely affect the historic property. If the property will be affected, the signatory parties, in consultation with the consulting parties, will determine acceptable mitigation to offset the

adverse effects anticipated, considering the nature and extent of the historic property. A decision on significance and mitigation shall be provided to Donlin Gold no later than within two working days following receipt of appropriate documentation (A(6)).

D. The USACE may assume the newly discovered property to be eligible for the NRHP for the purposes of Section 106 pursuant to 36 CFR 800.13(c) until the appropriate cultural resource assessment is completed. The USACE shall make a final decision in regard to NRHP eligibility and project effects. If there is a dispute between the USACE and SHPO concerning the NRHP eligibility of a resource, it would be resolved consistent with the requirements in Stipulation V(E). of this agreement.

E. Following consultation amongst the Signatories and Donlin Gold, the USACE may revoke or modify stop work orders, as determined appropriate and consistent with the stipulations of this PA and its originating laws and regulations. The USACE and the BLM, as applicable, shall have the right to issue, modify, and revoke stop work orders with respect to their respective permits, right-of-way grants, or other actions under their jurisdiction to ensure that requirements of this PA have been met for that part of the undertaking under their jurisdiction.

IX. TREATMENT OF HUMAN REMAINS

If human remains are discovered on federal lands, the USACE or the BLM will follow the provisions of applicable state and local laws and NAGPRA (25 U.S.C. § 3001). If human remains are discovered on state or private lands, provisions of the Human Remains Plan of Action shall be followed. These procedures are included in Section 7.1 of the CRMP (Appendix D); as appropriate, a NAGPRA Plan of Action will be prepared in accordance with this PA. Table 7.3 of the CRMP provides all necessary contact information.

A. Prior to project ground-disturbing activities, all project personnel will receive appropriate training that includes guidance on proper reporting of inadvertent discovery of human remains.

B. If human remains are found during any phase of project-related work, as soon as safe to do so, work will cease in their immediate vicinity and a 100-foot buffer zone will be flagged or fenced off to protect the remains. Donlin Gold's Cultural Resource Specialist (CRS), agencies, landowners, and tribal entities will be immediately notified as per the provisions of the CRMP.

C. The CRS will notify a peace officer (Alaska State Trooper, Missing Persons Bureau) and the Alaska SME immediately after the discovery, as stipulated in AS 12.65.005. If the remains appear to be recent (less than 50 years old) in the judgment of the CRS, a State Trooper and medical examiner will determine whether the remains are of a forensic nature and/or subject to criminal investigation. The local Village Public Safety Officer (VPSO) may also be notified.

D. The Alaska SHPO will also be notified of any discovery unless circumstances indicate that the death or burial is less than 50 years old and that there is a need for a criminal investigation or legal inquiry by the coroner.

E. If the human remains are found to be historic in nature, a qualified professional physical anthropologist with experience in the analysis of human remains will examine them to determine racial identity. The physical anthropologist shall document, analyze, and photograph the remains so that an independent assessment of racial identity can be made. The physical anthropologist shall be afforded no more than 30 days to conduct his or her analysis.

F. For human remains and/or associated Native American cultural items on federal or tribal lands, this plan of action will include consultation with the appropriate tribe as mandated by 43 CFR 10.5. Consultation will facilitate proposed treatment of the human remains and determine who is entitled to custody of the human remains and other cultural items under NAGPRA so that the disposition process can be completed.

G. If the unanticipated discovery consists of Native Alaskan human remains, Donlin Gold will consult with the Alaska SHPO, USACE, BLM, and appropriate Alaska Native organizations regarding measures to respectfully handle such a discovery. If it can be adequately determined that the identified human remains have affinity to any federally recognized Tribe(s), a reasonable effort will be made to identify, locate, and notify the Tribe. The appropriate Alaska Native regional corporations also will be contacted.

H. If the human remains are not Native Alaskan, and a determination has been made by the Trooper and Medical Examiner that a death investigation is not warranted, Donlin Gold, in consultation with the medical examiner, will attempt to identify, locate and inform descendants of the deceased.

X. EMPLOYEE AND CONTRACTOR CULTURAL RESOURCES TRAINING

A. As discussed in the CRMP in Appendix D, Donlin Gold shall provide cultural training to project personnel, contractors, and subcontractors. As practicable, the training will be conducted in concert with existing environmental, health and safety training, on the project during construction and operations. The cultural resource training component will inform project personnel of their responsibilities under the law, and clearly list procedures to follow in the event they encounter previously undiscovered cultural resources.

XI. MONITORING AND STOP WORK ORDERS

A. Donlin Gold shall ensure that an archaeologist meeting the qualifications of the Standards and Guidelines (48 FR 44738-44739) is present in areas of ground disturbing activity designated as high potential and indicated on Exhibit C of the CRMP, consistent with the CRMP and Stipulation V. Work in areas requiring archaeological monitoring will not proceed without an archaeological monitor in place unless an exemption is provided by USACE in writing. The archaeologist will have authority to halt ground-disturbing and construction activities as soon as is practicable considering worker safety in the immediate vicinity of the discovery in a manner consistent with Stipulations VIII and IX in this PA. The archaeologist will be responsible for reporting the results of monitoring and any recommendation that work be stopped at any point to protect historic properties.

B. The results of monitoring shall be included in a report to the USACE, BLM, and SHPO. This report shall be developed and incorporated into the annual cultural resources report, subject to review and acceptance by the USACE and BLM, and in consultation with SHPO.

C. Each of the agencies with jurisdiction in connection with this undertaking may oversee actions under its jurisdiction relating to implementation of this PA. Nothing in this PA is intended to expand the jurisdiction of the USACE or the BLM beyond that afforded by Section 106 and its respective regulations.

XII. COLLECTION AND CURATION

A. Materials collected in conjunction with recovery actions under this PA are the property of the appropriate state or federal land managing agency, or landowner if collected from privately owned property.

B. Federal agencies will curate any artifacts, materials, or records resulting from archaeological identification and mitigation conducted on federal lands under their jurisdiction in accordance with 36 CFR Part 79, “Curation of Federally-Owned and Administered Archaeological Collections.” Federal agencies with jurisdiction over the federal lands will consult with Indian tribes consistent with 36 CFR Part 79.

C. Donlin Gold will return all artifacts recovered from private lands to the respective landowner after analysis is complete. Donlin Gold will encourage and assist landowners in donating any returned artifacts to University of Alaska Museum of the North (Fairbanks) in accordance with an agreement negotiated between landowners and the Museum. Donlin Gold shall pay all reasonable curation fees associated with the donation of artifacts to the designated curation facility.

D. On federally controlled or owned properties, the federal agency will determine the disposition of human burials, human remains, and funerary objects in accordance with applicable federal law, inclusive of NAGPRA.

E. Artifacts, faunal materials, and/or samples collected on State lands during activities covered by this PA shall be deposited in the University of Alaska Museum of the North, along with records, field notes, and related materials in accordance with their curation procedures and requirements in force at the time of submission of materials.

F. Donlin Gold shall incur standard costs charged by the approved institution for curation of materials collected in conjunction with actions taken under this PA, as per Exhibit A of the CRMP.

G. Donlin Gold, in consultation with the University of Alaska Museum of the North, DNR, the SHPO, and conservation specialist(s), shall ensure that collected materials are conserved and packaged in a manner acceptable to DNR and receiving institution.

XIII. ANNUAL REVIEW AND REPORTS

A. Meetings

1. Annual Meeting: A meeting among the Signatories and Donlin Gold shall be held annually, no later than April 1, to discuss each previous year's activities and activities scheduled for the upcoming year during construction. The parties may be linked by telephone.
2. The annual report for the previous calendar year (see Section XIII.A.) shall be submitted by Donlin Gold to the Signatories by February 1 or at least 30 days prior to the annual meeting.
3. Additional Meetings: If any Signatory deems a meeting necessary in addition to the annual meeting described above, that party shall inform the other Signatories, who shall consider the request in consultation with the other parties.
4. Meeting Minutes: Donlin Gold shall provide all Signatories and make available to Concurring Parties to this PA (upon request) the minutes of the meetings described above within 15 calendar days of the date of the meeting(s).
5. The Signatories and Invited Signatories shall consult no later than on the five year anniversary from the Effective Date of this PA to review the effectiveness of the PA and its implementation, and evaluate whether the scope should be amended. The Signatories and Invited Signatories will conduct follow-up consultation every five years thereafter to monitor the effectiveness of the PA and identify any amendments necessary for continued effectiveness.

B. Reports

1. Annual Report: Each year, prior to the annual meeting, Donlin Gold will prepare and provide to the Signatories to this PA a written cultural resources report of previous and upcoming activities as they relate to compliance with the stipulations of this agreement. Consistent with 36 CFR 800.11(c) and Section 304 of the NHPA, sensitive cultural resources information shall be confidential. The report will include the following:
    a. A description of the past year's activities, including presentation of and revisions to training materials;
    b. A projection of the upcoming year's activities, including information about possible permit modifications;
    c. A summary of the past year's and anticipated upcoming efforts to identify, evaluate, and protect historic properties;
    d. Descriptions of any historic properties affected, as well as any testing, remediation, or mitigation efforts;
    e. Descriptions of artifacts or other archaeological or historic materials encountered, including representative photographs or drawings, a description of analyses, and other recordation documents as appropriate;
    f. A summary of artifacts sent to an approved facility for curation, or returned to the landowner, as appropriate;

g. Clear maps of areas surveyed or monitored, cultural resources identified, and alternative routes to be followed to avoid any identified historic properties; and

h. An evaluation of this PA and recommendations for any amendments or changes.

2. Certain archaeological surveys, special excavations, and/or testing efforts may require individual reports outside the normal reporting cycle in order to facilitate decision making processes. The scope and time parameters for these reports shall be determined on a case-by-case basis through consultation among the Signatories and Donlin Gold.

XIV. DISPUTE RESOLUTION

A. Should any of the Signatories or Invited Signatories to this PA object at any time to any actions proposed or the manner in which the terms of this PA are implemented, the USACE will consult with such party to resolve the objection. If it is determined that such objection cannot be resolved, the USACE will:

1. Forward all documentation relevant to the dispute, including the Signatory's dispute and USACE's proposed resolution, to the ACHP. The ACHP will provide the appropriate federal agency with its advice on the resolution of the objection within 30 calendar days of receiving adequate documentation. Prior to reaching a final decision on the dispute, the appropriate federal agency will prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, Signatories, Invited Signatory and Concurring Parties, and provide them with a copy of this written response. The USACE will then proceed according to its final decision.

2. If the ACHP does not provide its advice regarding the dispute within the 30 calendar-day time period, the USACE may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, the appropriate federal agency will prepare a written response that takes into account any timely comments regarding the dispute from the Signatories and Concurring Parties to the PA, and provide them and the ACHP with a copy of such written response.

B. All other actions subject to the stipulations of this PA, and that are not the subject of the dispute, will continue to be carried out as provided for by this PA.

XV. AMENDMENTS AND TERMINATION

A. Any Signatory or Invited Signatory to this Agreement may request that the other Signatories consider amending it, whereupon the parties shall consult to consider the amendment(s). Amendments will be executed in the same manner as the original PA. Concurring Parties may suggest proposed amendments to the Signatories, who shall consult to consider them.

B. If any Signatory or Invited Signatory to this PA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other parties to attempt to develop an amendment or agreement on other actions that would avoid termination. If within 30 calendar days an amendment or agreement on other actions that would avoid termination cannot be reached, any Signatory or Invited Signatory may terminate its participation in the PA upon written notification to the other Signatories.

C. If the PA is terminated in its entirety, and prior to work continuing on the undertaking, the USACE shall request, take into account, and respond to the comments of the ACHP in accordance with 36 CFR § 800. Following consultation with the ACHP, the USACE will notify the Signatories, Invited Signatories and Concurring Parties as to the determined course of action.

XVI. FAILURE TO CARRY OUT THE AGREEMENT

A. If the terms of this PA are not carried out, the Signatories to this PA agree to comply with 36 CFR Part 800 with regard to individual undertakings covered by this PA.

XVII. DURATION OF THIS PA

A. This PA will remain in effect throughout the life of the Project, and unless otherwise amended or terminated in accordance with Stipulation XV will expire 15 years from the Effective Date. At the expiration, the parties will consult to determine whether a new PA should be developed.

XVIII. EFFECTIVE DATE

This PA shall be effective as of the date (the Effective Date) when it has been signed (Executed) by the date of the last Signatory.

EXECUTION of this PA by the USACE, BLM, SHPO, and ACHP, and implementation of its terms, evidences that the USACE and the BLM have taken into consideration the effects of the Project on historic properties and afforded the ACHP an opportunity to comment. These entities have satisfied their Section 106 responsibilities for all activities associated with the Donlin Gold Project.

SIGNATORY PARTIES

U.S. Army Corps of Engineers

United States Department of the Interior, Bureau of Land Management

Alaska State Historic Preservation Officer

Advisory Council on Historic Preservation (pending)

INVITED SIGNATORY PARTIES

Alaska Department of Natural Resources

Donlin Gold, LLC

CONCURRING PARTIES

1 APPENDIX A: PROJECT AREA OF POTENTIAL EFFECTS

APPENDIX B: DEFINITIONS

Area of Potential Effects: The geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking [as noted in 36 CFR 800].

Concurring Parties: The signatory parties may agree to invite others (concurring parties) to concur in the PA. The refusal of any party invited to concur in the PA does not invalidate the PA, (as noted in 36 CFR § 800.6(c)(3)).

Consultation: The process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising in the section 106 process. The Secretary of the Interior's "Standards and Guidelines for Federal Agency Preservation Programs pursuant to the National Historic Preservation Act" provide further guidance on consultation (36 CFR § 800.16(f)).

Consulting Parties: Parties that have consultative roles in the Section 106 process, as defined in 36 CFR § 800.2(c).

Cultural Resource: Locations of human activity, occupation, or usage that contain materials, structures, or landscapes that were used, built, or modified by people.

Effect: Alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the NRHP (see 36 CFR § 800.16(i)).

Eligible for inclusion in the National Register: This term includes both properties formally determined as such in accordance with regulations of the Secretary of the Interior and all other properties that meet the National Register criteria.

Environmental Impact Statement: An analysis of a major federal action's environmental impacts conducted under the auspices of NEPA.

Historic Property: Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior pursuant to the criteria for evaluation set forth in 36 CFR § 60.4.

Indian Tribe: An Indian tribe, band, nation, or other organized group or community, including a native village, regional corporation or village corporation, as those terms are defined in section 3 of the Alaska Native Claims Settlement Act (43 U.S.C. § 1602), which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians,

Invited Signatory: The agency official may invite additional parties to be signatories to a PA; any such party that signs the PA shall have the same rights with regard to seeking amendment or termination of the agreement as other signatories. The USACE has invited Donlin Gold and Alaska DNR to be a signatory to this PA pursuant to 36 CFR § 800.6(c)(2). The refusal of any party invited to become a signatory pursuant to paragraph (c)(2) does not invalidate the PA.

National Register: The National Register of Historic Places maintained by the Secretary of the Interior.

Qualified Archaeologist: An archaeologist that meets the Secretary of the Interior's Standards and Guidelines for archeology (36 CFR Part 61), which consist of, at a

minimum, a graduate degree in archeology, anthropology, or closely related field plus, at least one year of full-time professional experience or equivalent specialized training in archeological research, administration or management; at least four months of supervised field and analytic experience in general North American archeology, demonstrated ability to carry research to completion, and at least one year of full-time professional experience at a supervisory level in the study of prehistoric or historic period archeology.

Signatory Parties: All Signatories to this PA.

Traditional Cultural Property: A property that is eligible for inclusion in the NRHP based on its associations with the cultural practices, traditions, beliefs, lifeways, arts, crafts, or social institutions of a living community. Traditional Cultural Properties (TCPs) are rooted in a traditional community's history and are important in maintaining the continuing cultural identity of the community. See https://www.nps.gov/history/tribes/Documents/TCP.pdf.

Undertaking: A project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including those carried out by or on behalf of a federal agency; those carried out with federal financial assistance; and those requiring a federal permit, license or approval.

APPENDIX C1: LIST OF FEDERALLY RECOGNIZED TRIBES INVITED TO PARTICIPATE IN CONSULTATION (* indicates a response that they will participate)

Calista Region

- Akiachak Native Community
- Akiak Native Community
- Village of Alakanuk
- Yupiit of Andreafski
- Village of Aniak
- Village of Atmautluak
- Orutsaramuit Native Village (aka Bethel)
- Village of Bill Moore's Slough
- Village of Chefornak
- Chevak Native Village
- Native Village of Chuathbaluk
- Chuloonawick Native Village
- Village of Crooked Creek*
- Native Village of Eek
- Emmonak Village
- Native Village of Georgetown
- Native Village of Goodnews Bay
- Native Village of Hamilton
- Native Village of Hooper Bay
- Village of Kalskag
- Village of Lower Kalskag
- Kasigluk Traditional Elders Council
- Native Village of Kipnuk
- Native Village of Kongiganak
- Village of Kotlik
- Organized Village of Kwethluk
- Native Village of Kwigillingok
- Lime Village
- Native Village of Marshall (aka Fortuna Ledge)
- Native Village of Mekoryuk
- Asa'carsarmiut Tribe
- Native Village of Napaimute
- Native Village of Napakiak
- Native Village of Napaskiak
- Newtok Village
- Native Village of Nightmute
- Native Village of Nunam Iqua
- Native Village of Nunapitchuk
- Village of Ohogamiut
- Oscarville Traditional Village
- Native Village of Paimiut
- Pilot Station Traditional Village
- Native Village of Pitka's Point
- Platinum Traditional Village
- Native Village of Kwinhagak (aka Quinhagak)
- Village of Red Devil
- Iqurmuit Traditional Council
- Algaaciq Native Village (St. Mary's)
- Native Village of Scammon Bay
- Village of Sleetmute
- Village of Stony River
- Nunakauyarmiut Tribe
- Tuluksak Native Community
- Native Village of Tuntutuliak
- Native Village of Tununak
- Umkumiut Native Village

Doyon Region

- Anvik Village
- Organized Village of Grayling
- Holy Cross Village
- McGrath Native Village
- Nikolai Village
- Shageluk Native Village
- Takotna Village
- Telida Village

Cook Inlet Region

- Knik Tribe*
- Native Village of Tyonek*

APPENDIX C2: LIST OF ALASKA NATIVE CORPORATIONS INVITED TO PARTICIPATE IN CONSULTATION (* indicates a response that they will participate)

Calista Region

Akiakchak Limited Corporation
Alakanuk Native Corporation
Arviq Incorporated (Platinum)
Askinuk Corporation (Scammon Bay)
Atmautluak Limited Corporation
Azachorok Incorporated (Mountain Village)
Bethel Native Corporation*
Calista Corporation*
Chefarnmute Incorporated (Chefornak)
Chevak Company
Chinuruk Incorporated (Nightmute)
Chuloonawick CorporationDeloycheet, Incorporated
Emmonak Corporation
Iqfijouaq Company (Eek)
Kasiglukm Incorporated
Kongnikilnomuit Yuita Corporation (Kotlik)
Kotlik Yupik Corporation
Kugkaktlik, Limited (Kipnuk)
Kuitsarak, Incorporated (Goodnews Bay)
Kwethluk Incorporated
Kwik Incorporated (Kwigillingok)
Lime Village Company
Maserculiq, Incorporated (Marshall)
Napakiak Corporation
Newtok Native Corporation
Nima Corporation (Mekoryuk)
Nunakauiak Yupik Corporation (Toksook Bay)
Nunapigllurtaq Corporation (Kotlik)
Nunapitchuk Limited
Ohog Incorporated (Lower Kalskag)
Oscarville Native Corporation (Napaskiak)
Paimiut Corporation (Hooper Bay)
Pilot Station, Incorporated
Pitka's Point Native Corporation (St. Mary's)
Qanirtuuq, Incorporated (Quinhagak)
Qemirtalek Coast Corporation (Kongiganak)
Russian Mission Native Corporation
Sea Lion Corporation (Hooper Bay)
St. Mary's Native Corporation
Swan Lake Corporation (Nunam Iqua)
The Kuskokwim Corporation*
Tulkisamute Incorporated (Tuluksak)
Tuntutuliak Land Limited Corporation
Tununrmiut Rinit Corporation (Tununak)

Doyon Region

Deloy Ges Incorporated (Anvik)
Doyon, Limited*
Hee-Yea-Lingde Corporation (Grayling)
MTNT, Limited (McGrath)
Zho-Tse, Incorporated (Shageluk)

Cook Inlet Region

Alexander Creek Native Corporation*
Cook Inlet Regional Incorporated*
Knikatnu Incorporated (Knik)
Tyonek Native Corporation*

APPENDIX C3: OTHER INVITED CONSULTING PARTIES

Alaska Historical Society
Alaska Native Language Center
Anvik Historical Society
City of Akiak
City of Alakanuk
City of Chefornak
City of Chevak
City of Chuathbaluk
City of Eek
City of Emmonak
City of Goodnews Bay
City of Grayling
City of Holy Cross
City of Hooper Bay
City of Upper Kalskag
Matanuska-Susitna Borough
City of Kotlik
City of Kwethluk
City of Lower Kalskag
City of Marshall
City of McGrath
City of Mekoryuk
City of Mountain Village
City of Napakiak
City of Nightmute
City of Nikolai
City of Nunam Iqua
City of Nunapitchuk
City of Bethel
City of Pilot Station
City of Platinum
City of Quinhagak
City of Russian Mission
City of Scammon Bay
City of Shageluk
City of St. Mary's
City of Toksook Bay
Cook Inlet Historical Society
Iditarod Historic Trail Alliance
Kenai Peninsula Borough
National Park Service, Alaska Regional Office
Tochak Historical Society
Yupiit Piciryarait Cultural Center

APPENDIX D: CULTURAL RESOURCES MANAGEMENT PLAN

DRAFT

CULTURAL RESOURCES MANAGEMENT PLAN

Donlin Gold Project

March 2018
(Revision 4.3)

4720 Business Park Blvd. Suite G-25
Anchorage, Alaska 99503

RESTRICTION STATEMENT

The locations of cultural resources noted in this plan are provided to facilitate permit review and compliance. Under the provisions of the Archaeological Resources Protection Act and the National Historic Preservation Act, site location information is restricted. Disclosure of such information is exempt from requests under federal and state freedom of information laws. This is not a public document. It is intended to facilitate Section 106 consultation by the U.S. Army Corps of Engineers, Bureau of Land Management, Alaska Office of History and Archaeology (OHA), and the Alaska State Historic Preservation Office (SHPO) (housed within OHA) and referred to as the combined OHA/SHPO. It is only intended for release to Donlin Gold LLC, Calista Corporation, The Kuskokwim Corporation, Cook Inlet Region, Inc., the Joint Pipeline Office, the BLM, the OHA/SHPO Alaska Tribes, and other appropriate consulting parties.

TABLE OF CONTENTS

EXHIBITS

TABLES

ACRONYMS

AHRS	Alaska Heritage Resources Survey
AHPA	Archaeological and Historic Preservation Act
AIRFA	American Indian Religious Freedom Act
APE	Area of Potential Effects
ARPA	Archaeological Resources Protection Act
AST	Alaska State Troopers
BLM	Bureau of Land Management
BTC	Birch Tree Crossing
Calista	Calista Corporation
Chumis	Chumis Cultural Resources Services
CIRI	Cook Inlet Region, Inc.
CRMP	Cultural Resources Management Plan (or plan)
CRR	Cultural Resources Report
CRS	Cultural Resources Specialist
Donlin Gold	Donlin Gold LLC
EIS	Environmental Impact Statement
ESRI	Environmental Systems Research Institute
GIS	Geographic Information Systems
INHT	Iditarod National Historic Trail
IRT	Iditarod Race Trail
MP	Mile Post
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NLURA	Northern Land Use Research Alaska, LLC
NRHP	National Register of Historic Places
NTSA	National Trails System Act
OHA	Office of History and Archaeology
PA	Programmatic Agreement
PFYC	Probable Fossil Yield Classification
PRPA	Paleontological Resource Preservation Act
SHPO	State Historic Preservation Office
SME	State Medical Examiner
TBD	To Be Determined
TCP	Traditional Cultural Property
TKC	The Kuskokwim Corporation
USACE	U.S. Army Corps of Engineers, Alaska District

UNITS OF MEASURE

km	kilometer(s)
cm	centimeter(s)
ft	foot/feet
m	meter(s)

1.0 INTRODUCTION

This Cultural Resources Management Plan (CRMP or plan) was developed by Donlin Gold LLC (Donlin Gold) as part of project plans for the Donlin Gold Project (project), a proposed open pit hardrock mining project in southwestern Alaska. The intent of this plan is to describe and implement Donlin Gold's program for consideration, management, and protection of cultural resources during project construction, operations, and reclamation phases in compliance with applicable laws and consistent with sound principles of cultural resources management.

1.1 Project Description

Donlin Gold is proposing to develop an open pit, hardrock gold mine 277 miles (446 kilometers [km]) west of Anchorage, 145 miles (233 km) northeast of Bethel, and 10 miles (16 km) north of the village of Crooked Creek, Alaska. The project includes the principal mine components listed below. Additional details regarding the proposed project are in the Project Description (SRK 2012a), and Natural Gas Pipeline Plan of Development (SRK 2012b).

- Mine Site – Open pit, waste rock facility, mill, tailings storage facility, freshwater dams, contact water dams, a natural gas power generation facility, and personnel camps.
- Transportation Infrastructure – A 5,000-foot (ft) (1,524-meter [m]) gravel airstrip, a port on the Kuskokwim River at the location known as Jungjuk (Jungjuk Port site), and a 30-mile (48-km) gravel road to connect the port and the mine site.
- Natural Gas Pipeline – A 14-inch (35.6 centimeters [cm]), 315-mile (507-km) buried steel pipeline to supply natural gas to the mine power plant originating (tie-in) at an existing natural gas pipeline near Beluga, Alaska.

1.2 Area of Potential Effects (APE)[1]

The direct effects APE consists of the mine lease area (including the proposed airstrip and road between the mine and airstrip), the proposed Jungjuk port and road, the natural gas pipeline corridor, and all associated material source sites and ancillary facilities. The indirect effects APE for the mine site (including the airstrip, Jungjuk port, and roads) will extend generally for 2 miles surrounding the mine site footprint, or the lease boundary, whichever is larger. The indirect APE for the pipeline (including ancillary facilities) may extend for up to 1 mile on each side of the pipeline centerline depending on topography and/or vegetation. The indirect effects APE for the Bethel port facility will be the facility footprint plus a 100-ft buffer around the facility footprint. Given the nature of the Kuskokwim River – with its constantly shifting route and ongoing seasonal erosion – mapping an indirect APE will result in inaccuracies and will be of little use. Rather, the agencies and Donlin will seek consulting party input to identify and consider significant sites along the Kuskokwim that may be affected by the proposed project-related activity along the river.

A map of the APE is included in Appendix A of the Programmatic Agreement (PA).

[1] 36 CFR 800.16(d) defines APE as: "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking."

Lands directly affected by the project include public lands managed by the Bureau of Land Management (BLM) and State of Alaska (State), and private lands owned by Calista Corporation (Calista), the Kuskokwim Corporation (TKC), and Cook Inlet Region, Inc. (CIRI).

1.3 Purpose and Objective of CRMP

Purpose: This CRMP was developed by Donlin Gold to describe project tasks and procedures to facilitate compliance with federal and state laws and regulations, as well as with pertinent cultural resource stipulations in project land use agreements with private landowners. This plan has been developed in cooperation with the signatories and consulting parties of the Donlin Gold Project PA. The PA was developed in compliance with the National Historic Preservation Act (NHPA) to describe procedures to mitigate potential adverse effects to eligible/listed historic properties. The PA is a legally binding agreement that records the signatories' commitments to resolve adverse effects to historic properties, including procedures for identifying, recording, and managing any newly discovered cultural resource sites. Under NHPA Section 106, only "historic properties" eligible for the National Register of Historic Places (NRHP) are considered, not all cultural resources. However, the National Environmental Policy Act (NEPA), the National Trails System Act (NTSA), and other acts may address protection of cultural resources that are not necessarily NRHP-eligible. In addition, this plan also addresses compliance requirements with the Paleontological Resources Preservation Act (PRPA).

Objective: The main objective of this plan is to provide procedures and guidance for Donlin Gold to conduct the project while considering, managing, and, where feasible, preserving the area's historic properties and other cultural resources that may warrant consideration and protection from adverse project effects. This CRMP will be in effect during the construction, operation, and reclamation phases of the project.

This CRMP describes procedures including:

- Training of workers regarding cultural resource issues and responsibilities;
- Measures to avoid or minimize impacts to cultural resources (e.g., flagging, monitoring);
- Standard protocols for any cultural resources that may be exposed during project construction, operations, and reclamation;
- Prescribed actions to be taken in the event that unanticipated cultural resources are discovered, or known resources are impacted in an unanticipated manner; and
- Protocols for treatment of any discovered human remains.

1.4 Cultural and Paleontological Resources

Based on requirements of the regulatory framework (Section 2.0) and consultation with participants developing the PA, the term "Cultural Resources" for purposes of this plan may include:

- Listed (or eligible for listing) historic properties (e.g., prehistoric/historic sites, districts, buildings, structures, traditional cultural properties [TCPs]) on the NRHP.
- Prehistoric Resources: Isolated occurrences or clusters of artifacts, features, and human burials, which are evidence of the activities of Native Alaskan peoples in the past. Indicators of prehistoric and protohistoric occupation by Native Alaskans include,

but are not limited to: artifacts of various natural materials, areas of soil discoloration, shell, animal bone, manuports, heat-altered stone, and human bone. Occurrences of prehistoric materials may include, but are not limited to:

  - artifacts (e.g., projectile points, shell beads);
  - habitations (e.g., house pit depressions, shell and/or midden deposits, fire-affected rock, heat-treated rock, manuports);
  - features (e.g., hearths, stone features, artifact caches); and
  - human remains (burials or isolated bone fragments).

- Historic Cultural Resources: Defined as isolated occurrences or clusters of artifacts, features, and structures (or their remains), at least 50 years of age (or exceptional, or having Native Alaskan religious significance) that are evidence of the activities of peoples of all ethnicities of the American historic period. Historic materials may include, but are not limited to:
  - Buildings and structures, or the remains thereof;
  - Trash pits, privies, wells, and associated artifacts, surface dumps, and artifact scatters;
  - Isolated artifacts or isolated clusters of artifacts (e.g., metal cans, glass bottles, ceramic vessels); and
  - Human remains (burials or isolated bone fragments).
- Native Alaskan sacred site or significant ethnic sites (of any age)

Paleontological resources (e.g., fossils), although not included under Section 106, are also addressed in this CRMP to protect these resources during the project construction (Section 7.2 and Exhibit B, Potential Fossil Localities on Federal Lands in the Proposed Donlin Gold Project Area and Natural Gas Pipeline Corridor (Figure B-1).

2.0 REGULATORY FRAMEWORK

This section is a summary of the key federal, state laws or regulations, and landowner stipulations that form the regulatory framework for development of this project in general, and specifically this CRMP.

2.1 Federal

The project area includes wetlands and waters of the United States; therefore, for certain project-related activities, Donlin Gold must obtain a permit issued by the U.S. Army Corps of Engineers, Alaska District (USACE), under provisions of Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899. Donlin Gold must also obtain right-of-way authorization for placement of portions of the pipeline on BLM-managed lands. Before making these federal decisions, the federal agencies must comply with NEPA. The USACE is the lead NEPA agency developing an Environmental Impact Statement (EIS) for the project. The BLM is a cooperating agency in developing the EIS. The project is subject to applicable federal laws and regulations pertaining to protection and consideration of possible adverse effects on cultural resources (defined for this CRMP in Section 1.4). The key federal acts, and Executive Order pertaining to cultural resources in Alaska are summarized below.

- **National Environmental Policy Act (NEPA 1969: 16 U.S.C. 4321-4347, as amended)**

The NEPA process is intended to help federal agencies make decisions that are based on an understanding of all potential environmental consequences and to encourage actions that protect, restore, and/or enhance all aspects of the affected environment, including cultural resources. NEPA also provides opportunities for input from agencies, Tribes, and the public during development and review of the EIS. Regulations at 40 CFR 1500–1508 establish the policy requirements that are binding on all federal agencies for implementing NEPA.

- **National Historic Preservation Act (NHPA 1966: 16 U.S.C. 470, as amended)**

Section 106 of the NHPA requires federal agencies to take into account the effect of their undertakings on historic properties and afford the Advisory Council on Historic Preservation an opportunity to comment. Federal undertakings are defined as federally funded, licensed or permitted projects, or projects on federal land which may affect either a property listed on the NRHP, or an eligible property. "Historic Properties" are defined as those listed in, or eligible for, the NRHP (36 CFR 800.16(l)(1)). PAs are executed pursuant to NHPA Section 106 (specifically at CFR 800.14) and are compliance agreements setting forth how the federal agencies and project proponents will avoid, minimize, or mitigate adverse effects to historic properties. A PA is one of a variety of methods available to federal agencies to meet their Section 106 obligations.

- **Archaeological and Historic Preservation Act (AHPA 1974, a.k.a. the Moss-Bennett Act)**

The AHPA addresses the requirements of archaeological site data preservation for sites on federal land.

- **Archaeological Resource Protection Act of 1979 (ARPA)**

ARPA was enacted to protect archaeological sites, artifacts and human remains on federal lands from looting by providing effective law enforcement and penalties for convicted violators. ARPA makes it illegal to excavate or damage archaeological resources located on public or Native lands without a permit, and to sell, purchase, exchange, transport, or receive archaeological resources that were excavated illegally under federal, state, or local law.

- **Native American Graves Protection and Repatriation Act of 1990 (NAGPRA)**

NAGPRA provides for consultation with Native groups when Native burials may be, or are accidentally, disturbed by an action, and for inventorying and repatriating collections already held by federal museums and institutions. Alaska Native human remains, funerary objects, sacred objects, and objects of cultural patrimony as defined in NAGPRA (25 U.S.C. § 3001), encountered on BLM or other federal land in connection with the undertaking shall not be intentionally excavated or removed without a permit under ARPA, 16 U.S.C. § 470cc, and consultation with the appropriate Tribes. NAGPRA regulations apply only to federally-owned lands.

- **National Trails System Act (NTSA)**

The Iditarod National Historic Trail (INHT) was designated by Congress to recognize the trail's significance as a historic transportation route. The NTSA establishes trails to "promote outdoor recreation and the preservation of, public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas and historic resources." The INHT extends from Seward, Alaska, to Nome, Alaska, following the routes as depicted on maps identified as "Seward-Nome Trail," in the Department of the Interior study report entitled: *The Iditarod Trail (Seward-Nome Route) and other Alaskan Gold Rush Trails*. The BLM, as Trail Administrator, coordinates cooperative management of the INHT among a variety of land owners including the State of Alaska, federal agencies, Native corporations, and private land owners.

- **American Indian Religious Freedom Act (AIRFA 1978)**

The AIRFA promotes federal agency consultation with Tribes regarding activities that may affect their traditional religious rights and cultural practices. These include, but are not limited to, access to sacred sites, freedom to worship through ceremonial and traditional rights, and use and possession of objects considered sacred. These rights and practices may be associated with, and lend significance to, a property.

- **Executive Order 11593 – Protection and Enhancement of the Cultural Environment**

Executive Order 11593 directs the federal government to provide leadership in preserving, restoring, and maintaining the historic and cultural environment of the nation by initiating measures necessary to preserve, restore, and maintain (for the inspiration and benefit of the people) federally owned sites, structures, and objects of historical, architectural, or archaeological significance.

- **Paleontological Resource Preservation Act (PRPA 2009, Preservation Law 111-011)**

The PRPA only applies to federal lands and does not affect private lands. It provides authority for the protection of paleontological resources on federal lands such as issuing permits for collecting paleontological resources, curation of paleontological resources, and confidentiality of locality

data. It also includes criminal and civil penalties for fossil theft and vandalism. BLM Instruction Memo 2016-124-11 provides guidance for BLM implementation of PRPA 2009.

2.2 State of Alaska

The project area includes land owned by the State of Alaska; therefore, development plans are subject to provisions of state laws regarding historic, prehistoric, and archaeological resources threatened by public construction.

- **Alaska Historic Preservation Act (AHPA) (AS 41.35)**

The AHPA is central to the management of cultural resources on state-owned land. AS 41.35.070 stipulates:

> **(b)** "*Before public construction or public improvement of any nature is undertaken by the state, or by a governmental agency of the state or by a private person under contract with or licensed by the state or governmental agency of the state, the department may survey the affected area to determine if the area contains historic, prehistoric, or archeological values.*
>
> **(c)** *If the department determines that historic, prehistoric, or archeological sites, locations, or remains will be adversely affected by the public construction or improvement, the proposed public construction or improvement may not be commenced until the department has performed the necessary investigation, recording, and salvage of the site, location, or remains. All investigation, recording, and salvage work shall be performed as expeditiously as possible so that no state construction project will be unduly impaired, impeded, or delayed.*
>
> **(d)** *If in the course of performing public construction or improvements, historic, prehistoric, or archeological sites, locations, remains, or objects are discovered, the department shall be notified and its concurrence shall be requested in continuing the construction or improvement. Upon receipt of this notice, the department shall survey the area to determine whether the area contains historic, prehistoric, or archeological data which should be preserved in the public interest. The survey shall be conducted as expeditiously as possible. If, as a result of the survey, it is determined that (1) this data exists in the area, (2) the data has exceptional historic, prehistoric, or archeological significance, and should be collected and preserved in the public interest, and (3) it is feasible to collect and preserve the data, the department shall perform the necessary work to collect and preserve the data. This work shall be performed as expeditiously as possible.*
>
> **(e)** *If the concurrence of the department required under (b) and (c) of this section is not obtained after 90 days from the filing of a request for its concurrence to proceed with the project, the agency or person performing the construction or improvement may apply to the governor for permission to proceed without that concurrence, and the governor may take the action the governor considers best in overruling or sustaining the department."*

Additionally, AS 41.35.80 requires permits for archaeological and historic property investigations as follows:

> "*The commissioner may issue a permit for the investigation, excavation, gathering, or removal from the natural state, of any historic, prehistoric, or archeological resources of the state. A permit may be issued only to persons or organizations qualified to make the investigations, excavations, gatherings, or removals and only if the results of these authorized activities will be made available to the general public through institutions and museums interested in disseminating knowledge on the subjects involved. If the historic, prehistoric, or archeological resource involved is one which is, or is located on a site which is, sacred, holy, or of religious significance to a cultural group, the consent of that cultural group must be obtained before a permit may be issued under this section."*

Several laws are applicable to the discovery of human remains in Alaska. The State Medical Examiner (SME) has jurisdiction over all human remains in the state (with rare exceptions, such as military aircraft deaths), regardless of age.

AS 12.65.5 requires immediate notification of a peace officer of the state (police, Village Public Safety Officer, or Alaska State Troopers [AST]) and the SME when death has "been caused by unknown or criminal means, during the commission of a crime, or by suicide, accident, or poisoning." In this regard, contact the AST/Missing Persons Bureau first. (Table 7-3) The AST has interpreted notification procedures as applicable to all remains, including ancient remains.

AS 11.46.482(a)(3), which applies to all lands in Alaska, makes the "intentional and unauthorized destruction or removal of any human remains or the intentional disturbance of a grave" a class C felony.

AS 41.35.200, which applies only to State lands, makes the disturbance of "historic, prehistoric and archeological resources" (including graves, per definition) a Class A misdemeanor.

AS 18.50.250, which applies to all lands in Alaska, requires permits for the disinterment, transport, and re-interment of human remains. Guidance and permits are available from the Bureau of Vital Statistics (now Health Analytics & Vital Records).

3.0 PREVIOUS RESEARCH AND CULTURAL RESOURCES IDENTIFIED WITHIN THE PROJECT AREA

Phase I (surveys) and Phase II (evaluation reports and eligibility recommendations) have been completed for most areas that have the potential to be directly affected by project activities. The formal APE will remain somewhat flexible as project planning proceeds, but a large area along the pipeline corridor, project alternatives, and mine lease boundary have been assessed. Mitigation efforts may be required for sites where adverse effects cannot be avoided/minimized. This section addresses known resources.

Previous work has identified 72 cultural resources (Table 3-1). Fifty-five (55) of the identified resources are classified as prehistoric and 17 are historic. Forty-nine (49) of the 72 cultural resources are within the APE. Twenty-one (21) sites were deemed eligible or treated-as-eligible (13 sites are historic and 8 are prehistoric). Eligibility determination was made for 14 sites and 7 were treated-as-eligible, because additional investigation is needed to determine NRHP eligibility or the determination is pending (Table 3-1). The sites within the APE, along with recommended mitigation are listed in Table 3-2.

Table 3-1: Number of Cultural Resources Identified in Previous Studies

Classification	Cultural Resources Identified	NRHP Eligible Historic Properties
Prehistoric	55	13
Historic	17	8
Total	**72**	**21**

Sources: Reuther et al. 2004; Wooley et al. 2007; Wooley et al. 2008; Proue et al. 2009; Reuther et al. 2010; Hays et al. 2011; Reuther et al. 2011; Hays et al. 2012a; Reuther et al. 2012; Reuther et al. 2013; Rogers et al. 2013.

Ten Phase I identification surveys and Phase II site evaluation reports have been submitted by Donlin Gold to: USACE, BLM, OHA/SHPO, TKC, Calista, and CIRI. EOE (Evaluation of Eligibility) forms were included in the following reports: *Site Evaluations of Known Cultural Resources within the Proposed Donlin Creek Mine Area Lease Boundary* (Hays et al, 2011); *Phase I and II Cultural Resources Survey of the Proposed Donlin Gold Natural Gas Pipeline* (Reuther et al. 20132012); *Results of the 2013 Phase I and Phase II Cultural Resources Survey of the Jones and Pretty Creek Realignment Routes of the Proposed Donlin Gold Natural Gas Pipeline Study* (Rogers et al. 2013), and other project reports.

3.1 Iditarod National Historic Trail

Approximately 62 miles of the Iditarod Trail would be present within the APE within the Rainy Pass area (from approximately the “Skwentna Crossing” to Three Mile Creek) and the South Fork of the Kuskokwim area. Construction of the proposed pipeline would result in both direct temporary construction-related impacts and longer term indirect impacts to the setting through visual effects. The buried pipeline would cross the Iditarod National Historic Trail (INHT) 4 times, and would be collocated within the INHT for 2.5 miles and in proximity (within 1,000 feet [ft]) for approximately 14.3 miles (PFEIS USACE, 2017). However, after the project’s adoption of the “North Route” variant, approximately 47 miles of the Iditarod Trail would be present within the

APE, and the ROW would cross the INHT 4 times. Potential effects to the Iditarod Trail include alteration of character-defining features and integrity (e.g., location, design, setting, feeling, and association); and changes in scenic quality.

Table 3-2 lists the 14 eligible sites within the APE considering the current project plans (i.e., use of "North Route").

Table 3-2: Summary of Eligible Sites within APE and Recommended Mitigation

AHRS No.	Nature of Resource	Recommended Mitigation	Land Owner	Anticipated Adverse Effect[2]	Project Area
IDT-00292	Lithic scatter	-	Calista	No Adverse Effect	Mine Area
IDT-00275	Lithic scatter	-	Federal	No Adverse Effect	Pipeline corridor
IDT-00288	Surface lithic artifacts	Spatial analysis	Federal	Physical destruction or damage	Pipeline corridor
MCG-00071	Stratified subsurface features	Phase III Excavation and Data recovery	State	Physical destruction or damage	Pipeline corridor
MCG-00072	Subsurface lithic artifacts	-	State	No Adverse Effect	Pipeline corridor
MCG-00075	Subsurface lithic artifacts	-	State	No Adverse Effect	Pipeline corridor
MCG-00076	Subsurface lithic artifacts	-	State	No Adverse Effect	Pipeline corridor
TYO-00022	Mountain Climber roadhouse		State	No Adverse Effect	Pipeline corridor
TYO-00277	Depression features	Phase III Excavation and Data recovery	State	Physical destruction or damage	Pipeline corridor

[2] Assessments of effect were determined by the U.S. Army Corps of Engineers, and received concurrence from the Alaska SHPO.

AHRS No.	Nature of Resource	Recommended Mitigation	Land Owner	Anticipated Adverse Effect[2]	Project Area
SLT-00094	Multi-locus surface/subsurface features	Additional Phase II Survey and Delineation	Calista/TKC	Close proximity to construction activities	Jungjuk Port site
TYO-00215	Historic cabin	Documentation and report	State	Temporary visual effect	Pipeline corridor
TYO-00363	Historic campsite	-	State	No Adverse Effect	Pipeline corridor
IDT-00260	Historic cabin	Data recovery	State	Close proximity to construction activities	Mine area
IDT-00261	Historic cabin	-	TKC	No Adverse Effect	Mine area
Iditarod Trail (Good Iditarod Trail, Iditarod National Historic Trail, Iditarod Race Trail) TAL-00055, TYO-00085, MCG-00125	Linear trail segments	Creative Mitigation (See Section 6.5.1)	State	Alteration of character-defining features and integrity, changes in scenic quality	Pipeline corridor

4.0 PROJECT IMPLEMENTATION SEQUENCE AND SCHEDULE

This section presents an overview of the tasks to be performed to consider, manage, and, if feasible, protect cultural resources. It is important to note that this plan covers all phases of the project including: pre-construction, construction, operations, and reclamation. Generally, ground-disturbing activities associated with construction present the largest risk of impact to cultural resources. The bulk of construction activities for the project will occur during the project construction phase. However, construction activities related to the growth of the mine will also occur during the operations and reclamation phases.

4.1 Pre-Construction Phase

Pre-construction phase tasks (prior to ground-disturbing activities) related to cultural resources include:

- Submit annual Cultural Resources Report (CRR) report (as outlined in PA Section XIII (B)) by February 1 or at least 30 days prior to the annual meeting.
- Submit draft Construction Monitoring Plan for review by signatories at least 30 days prior to the annual meeting.
- Annual meeting with PA signatories to discuss each year's activities, review and approve monitoring plan (Exhibit D) and any other activities scheduled for the upcoming year during construction.
  - Prepare meeting minutes and share with all signatories of the PA.
  - Provide copies of meeting minutes to concurring signatories within 15 days, upon request.
- Conclude surveys to identify and evaluate other potential cultural resources in areas, not yet surveyed:
  - Pipeline "North Route" alignment.
  - Pipeline ancillary facilities (all areas outside of the surveyed 300-ft wide corridor).
- Evaluate potential TCPs in the APE.
- Address Tribal and local concerns regarding cultural resources.
- Address curation options in consultation with landowners.
- Complete Visual Documentation of the INHT (Section 6.5.1)
- Fabricate stone artifact replicas (Section 6.5.2)
- Review PA effectiveness with PA signatories and invited signatories every 5 years (if applicable).

4.2 Construction Phase

Construction phase tasks (initiation of ground breaking activities leading up to mill processing) for which Donlin will be responsible for related to cultural resources include:

- Submit annual CRR report, including draft treatment plans, by February 1 or at least 30 days prior to the annual meeting.
- Annual meeting with PA signatories to discuss each year's activities, and activities scheduled for the upcoming year during construction.
  - Prepare meeting minutes and share with all signatories of the PA.
  - Provide copies of meeting minutes to concurring signatories within 15 days upon request.
- Designate a Cultural Resource Specialist(s) (CRS) (qualified archaeologist contractor(s) per 48 FR 44738-4473936) and provide the contractor list to OHA/SHPO, BLM, USACE, and other PA invited signatories parties.
- Train new employees for on-site cultural resources awareness (during first week of employment).
- Track progress of construction and project schedule.
- Monitor for cultural resources when and where necessary (Section 6.3).
- Identify and evaluate cultural resources that may be discovered during construction activities.
- Mitigate effects to eligible historic properties per consultation if avoidance/minimization is not possible.
- Conduct test investigations or data recovery analysis and reports per consultation (if buried cultural resources are discovered during construction activities).
- Prepare artifacts and other cultural materials to be curated.
- Transfer artifacts and cultural materials to the approved curating facility.
- Initiate INHT minimization and supplemental mitigation measures (Section 6.5.1): Pipeline construction at INHT Crossings; Placement of surface structures; Material Site MS-25; Initiate Donlin Gold INHT Annual Endowment.
- Review PA effectiveness review with PA signatories and invited signatories every 5 years (if applicable).

Additional construction phase tasks include notifying the Authorized Officer within 24 hours of any discoveries not subject to prescriptive treatment; maintaining daily logs and weekly summaries; and preparing compliance reports of all cultural resources monitoring and mitigation activities.

4.3 Operations Phase

Operations phase tasks related to cultural resources include:

- Submit annual CRR report by February 1 or at least 30 days prior to the annual meeting.
- Annual meeting with PA signatories to discuss each year's activities, and activities scheduled for the upcoming year during construction.
  - Prepare meeting minutes and share with all signatories of the PA.

  - Provide copies of meeting minutes to concurring signatories within 15 days upon request.
- Train new employees for on-site cultural resources awareness (during first week of employment).
- Track progress of operation activities and project schedule.
- Monitor for cultural resources when and where necessary (Section 6.3).
- Evaluate cultural resources that may be discovered during construction activities.
- Mitigate effects on eligible historic properties per consultation, if avoidance/minimization is not possible.
- Conduct test investigation or data recovery analysis and reports, per consultation (if buried cultural resources are discovered during construction activities).
- Prepare artifacts and other cultural materials to be curated.
- Transfer artifacts and cultural materials to the approved curating facility.
- Continue INHT creative mitigation (Section 6.5.1): Donlin Gold INHT Annual Endowment.
- Review PA effectiveness review with PA signatories and invited signatories every 5 years (if applicable).

Additional operations phase tasks include notifying the Authorized Officer within 24 hours of any discoveries not subject to prescriptive treatment; maintaining daily logs and weekly summaries; and preparing compliance reports of all cultural resources monitoring and mitigation activities.

4.4 Reclamation Phase

Reclamation phase tasks related to cultural resources include:

- Submit annual CRR report by February 1 or at least 30 days prior to the annual meeting.
- Annual meeting with PA signatories to discuss each year's activities, and activities scheduled for the upcoming year during construction.
  - Prepare meeting minutes and share with all signatories of the PA.
  - Provide copies of meeting minutes to concurring signatories within 15 days upon request.
- Train new employees for on-site cultural resources awareness (during first week of employment).
- Track progress of reclamation activities and project schedule.
- Monitor for cultural resources when and where necessary (Section 6.3).
- Evaluate cultural resources that may be discovered during reclamation activities.
- Mitigate effects on eligible historic properties, per consultation if avoidance/minimization is not possible.

- Conduct test investigation or data recovery analysis and reports, per consultation (if buried cultural resources are discovered during project activities).
- Prepare artifacts and other cultural materials to be curated.
- Transfer artifacts and cultural materials to the approved curating facility.
- Review PA effectiveness review with PA signatories and invited signatories every 5 years (if applicable).

Additional reclamation phase tasks include notifying the Authorized Officer within 24 hours of any discoveries not subject to prescriptive treatment; maintaining daily logs and weekly summaries; and preparing compliance reports of all cultural resources monitoring and mitigation activities.

4.5 Management Structure (Authority and Responsibility)

Donlin Gold has granted all employees, contractors, and the CRS the authority to stop work in the event of an unanticipated discovery of a cultural resource material, consistent with the procedures outlined in Section 7.0 Unanticipated Discoveries.

Cultural Resource Specialist(s) (CRS) – A qualified archaeologist as defined in 48 FR 44738-4473936. The CRS acts as the responsible party for cultural resources issues.

A formal management structure, including roles and responsibilities of cultural resource specialists and their qualifications, will be identified and submitted for review to USACE, BLM, and SHPO, at least 60 days prior to start of construction.

5.0 EMPLOYEE AND CONTRACTOR CULTURAL TRAINING

Donlin Gold will provide cultural training to Donlin Gold project personnel, contractors, and subcontractors within their first week of employment. The training materials will be prepared or approved by a qualified archaeologist meeting the qualifications of 48 FR 44738-4473936. As practicable, the training will be conducted in concert with existing environmental, health and safety training, on the project during construction and operations. The cultural training will focus on the following issues:

- Regulatory policies and laws protecting resources, and penalties for violations.
- Basic identification of cultural resources.
- The rationale for cultural resources monitoring.
- The procedures to follow in case of discovery of such resources.

6.0 AVOIDANCE, MINIMIZATION, AND MITIGATION

As agreed upon in the PA, Donlin Gold will, to the extent practicable, avoid all known eligible historic properties and paleontological resources. Avoidance is the preferred resolution of potential adverse effects. If adverse effects cannot be resolved through avoidance, then Donlin Gold will look for ways to minimize adverse effects, and develop mitigation or treatment plan(s) in consultation with the USACE, SHPO, other appropriate agencies, and consulting parties as agreed upon in the PA.

6.1 Avoidance

Eligible properties within the APE, for which the project has designed to avoid (Table 3-2: Summary of Eligible Sites within APE and Recommended Mitigation), will be typically given a protective buffer of 500 ft (152 m) but no less than 100 ft from the site limits. This will not be practicable for some sites, like SLT-00094, where the site limits are less than 100 ft to the proposed project limits. The following sites will be flagged by the CRS in a conspicuous manner and avoided:

- IDT-00260 Lewis Gulch Main Cabin
- IDT-00261 Grouse Creek Cabin
- SLT-00094 Angyaruaq
- IDT-00275 Surface Lithic Artifacts
- MCG-00072 Subsurface Lithic Artifacts
- MCG-00076 Subsurface Lithic Artifacts
- TYO-00215 Historic Cabin

Donlin Gold will enforce avoidance of the flagged areas during construction and reclamation activities (identified as the periods when inadvertent disturbance of a site would be most likely) and remove flagging once construction activity in the area is completed to detract attention and prevent potential vandalism.

6.2 Minimization

Revision and re-routing of the natural gas pipeline route away from portions of the INHT and IRT completed during project planning will avoid effects on some portions of these resources. During consultation, other methods have been discussed (e.g., vegetation buffers, operations protocols) that may minimize indirect effects on these and other resources. The results of these discussions included a commitment to the following:

- Pipeline Construction at INHT Crossings – As practicable, pipeline ROW construction at INHT crossings will be in a manner that minimizes the observer's view of the pipeline ROW. This may include narrowing and/or feathering of the pipeline construction ROW and placement of visual barriers such as vegetation, brush piles, and/or berms (refer to September 25, 2017 meeting summary, Exhibit E).

- Placement of Surface Infrastructure – As practicable, mile markers, main blocks valves, and cathodic protectors will be placed at inconspicuous locations to avoid or minimize their view from the INHT.

6.3 Monitoring

For the purposes of this plan, archaeological monitoring during construction is defined as on-the-ground, close-up observation by a CRS. The objectives of monitoring are:

- Protect existing cultural resources from construction effects.
- Identify, at the time of discovery, any archaeological materials exposed during ground disturbance.
- Notify and apprise SHPO, applicable land owner(s) and Tribe(s) of all discoveries of cultural resources.

A monitoring plan will be developed and revised as needed based on consultation with PA signatories (Exhibit D).

Consultation among the USACE, BLM, ACHP, SHPO, and other consulting parties has determined that archaeological monitoring shall be conducted in areas specified in Exhibit C, identified as a result of previous fieldwork, examination of local geomorphology, predictive modeling, and best professional judgment. Predictive model development, implementation, and re-iteration based on field results are described in Reuther et al. 2010 and subsequent field survey reports.

Archaeological monitoring may also be initiated, per consultation, if project personnel believe that potential archaeological material has been found in the project area. The CRS will attempt to define and identify any discovered archaeological finds, halt construction in the vicinity of a find (if necessary, in order to evaluate it), and keep a daily log of construction activities observed and any archaeological finds. The CRS will set out flagging or fencing to create a buffer zone around known or discovered cultural resources signifying that ground-disturbing activities are not allowed at those locations. The CRS will check that the flagging and fencing remains a visible and effective barrier until project activities have been completed in the vicinity (adjacent to the flagged buffer area) of the cultural resource.

The CRS will provide recommendations of eligibility for the NRHP to the authorized individual (per Article III of the PA) for review and approval. Full-time monitoring will be conducted at sites where NRHP-eligible cultural resources have been discovered. This is defined as careful observation of the ground-disturbing activities of all machines on a construction site for as long as the machines are being operated. This type of monitoring requires one monitor per active earthmoving machine working in the archaeological-sensitive site. Full-time archaeological monitoring, if necessary, may require more than one monitor working at a time, depending on number of machines and distance between machines. If one monitor cannot observe all ground disturbances at the same time, additional monitors will be assigned so that all ground-disturbing activities can be observed.

The CRS will coordinate with Tribal participants, as appropriate, during Tribal monitoring of ground disturbance areas where archaeological resources or human remains have been discovered or are anticipated to be encountered. Wherever possible, these areas will be identified prior to the initiation of construction, in consultation with consulting parties. Tribal participation will be initiated at the time archaeological resources are found by construction personnel or the project owner and

assessed as Native Alaskan cultural resources by the CRS. If a Tribal monitor becomes necessary during project construction, the Tribal monitor(s) shall be chosen from the current list of Tribal representatives in the PA. If artifacts are recovered in these efforts, they will be handled (Section 6.4) and curated (Section 6.7) as outlined in this plan. If human remains are identified on federal lands within the APE, then the regulations contained in the NAGPRA would apply.

6.4 Standard Mitigation

Mitigation is a way to remedy or offset an adverse effect or a change in a historic property's qualifying characteristics. ***Treatment*** is the act of mitigating those effects, agreed upon in consultation. Consultation among the consulting parties will precede and inform all mitigation actions.

Standard mitigation treatment for archaeological sites typically consists of site excavation and archaeological "data recovery" and dissemination of information as appropriate. Guided by a formal Research Design, a portion of sites that will be affected by the project will be excavated and the resultant data recorded. This process ensures that the archaeological site or material will be thoroughly documented, analyzed, and curated so that project activities can proceed as planned.

For standard mitigation planning purposes, sites in the project area recommended as eligible for the NRHP and with an anticipated adverse effect from the project (Table 3-1), were categorized on the basis of criteria such as period, size, stratification, artifact type, and data-recovery potential. Recommended mitigation methods for each site type are described below.

Donlin Gold's CRS will draft treatment plans and submit them to the signatories 30 days prior to the annual construction phase meeting (Section 4.2). The treatment plans will specify how effects to eligible historic properties will be mitigated if avoidance/minimization is not possible. Review and approval of final treatment plans, in consultation with and with input from consulting parties, will occur during the annual meeting.

6.4.1 Methods for Stratified Prehistoric Sites with High Data-Recovery Potential

Phase III Excavation and Data Recovery is the recommended mitigation approach for two prehistoric sites with the highest data-recovery potential (MCG-00071, TYO-00277). The level of mitigation effort will be commensurate with the potential project effects on these sites. All data recovery mitigation will be accompanied by a formal research design to be submitted for review by the signatories and approval (along with applicable permits) by the OHA/SHPO prior to planned construction in the respective zones where these sites are located.

High-resolution topographic mapping using surveying instruments (type Leica TS-06 total station) will be used to generate a pre-disturbance map of the site. Semi-permanent primary site datum points will be established with rebar and capped and labeled with the site number and date. All subsequent intermediate datum points will be established in the same grid and coordinate system, and measured relative to the main site datum points. All features, tests, excavation units and *in situ* artifact point proveniences will be recorded with total station as well. Positional data collected at each site will be used to determine contextual relationships among artifacts and features. Distribution maps can potentially be used to ascertain possible uses of space within the excavated areas. Mapping and spatial distribution files will be compatible with Environmental Systems Research Institute (ESRI) Geographic Information Systems (GIS) systems (ArcGIS).

A 3-inch core sampler and bucket auger and/or test pits will be used to test subsurface extents of the buried components outside the test excavations. Excavation units will be placed based on visible surface features and knowledge of the site gained through previous testing. All units will be hand excavated using trowels and dustpans. Excavated sediments will be screened through a ¼-inch mesh screen, as possible. Texture and dampness of the soils could make selecting a sample of sediments necessary. Bulk soil samples will be collected for flotation from around any hearths or evident floor structures encountered. Stratigraphic profiles and descriptions will be provided for all units and tests. Stratigraphic, sediment, and soil descriptions will follow national conventions established by the US Department of Agriculture Soil Survey (Soil Survey Division Staff 1993).

Recovered artifacts will be bagged in the field and each bag will be labeled with the following information: unit, level, depth below unit datum, date, excavator, contents, site number, field specimen and/or total station shot number (when applicable). Artifacts will be examined and described in the CRS's or selected consultant's labs and comparative analysis will be made to other collections at facilities such as University of Alaska Museum and the University of Alaska, Anchorage, Anthropology Laboratory. Metal, obsidian, and sediments will be analyzed using a portable X-ray florescence unit, as appropriate. All artifacts will be measured, described, and photographed using high-resolution digital cameras. Organic artifacts will be conserved using appropriate techniques prescribed following consultation with curatorial personnel. All artifacts and non-artifact samples collected will be accessioned to the appropriate curation facility. Cataloguing, processing and collections transfer will occur after the analysis and final reporting are complete (Curation Agreement, Exhibit A). Donlin will target completion of this work within one year to 18 months from the recovery of the artifacts.

Sampling methods for artifacts, charcoal and wood, plant macrofossils, fauna, and sediment will follow standard best practices in archaeology (Wooler et al. 2012). Samples will be collected separately and assigned specific field specimen numbers and proveniences. Sample locations will be plotted on excavation unit maps, and their 3-point position recorded using a total station to increase mapping accuracy. Samples recovered from excavation and test unit walls will be recorded on stratigraphic profiles. Bulk sediment samples may be collected for sieving through finer mesh and flotation in the laboratory to recover smaller artifact and non-artifact remains.

Radiocarbon dating and tephrochronology will be used to assess the age of occupations and potential contemporaneity of cultural features at the sites. Organic samples from features, and in tight associative context with cultural materials and deposits, will be collected for radiocarbon dating. Accelerator mass spectrometry radiocarbon is the preferred technique to date organic materials. Because much of the project area lies in a historically volcanic region, volcanic ash (tephras) falls can potentially be used as chronological markers to understand the general timing of occupations based on stratigraphic positioning to the tephras.

Digital photography will be used to record all phases of the project, from mapping and excavation through artifact analysis and documentation. All photographs taken in the field will be recorded in photograph logs that are later digitized.

6.4.2 Methods for Historic Sites with High Data-Recovery Potential

Two historic cabin sites were recommended as eligible for the NRHP (TYO-00215, and IDT-00260). Recommended mitigation methods for these historic sites are: data recovery (including testing and limited shallow excavation) following an approved research design; detailed site mapping; and artifact analysis. Excavation(s) for data recovery would in dimensions of either 3.3 ft x 3.3 ft or 3.3 ft x 6.6 ft (1 m x 1 m or 1 m x 2 m).

High-resolution topographic mapping using surveying instruments (type Leica TS-06 total station) will be used to generate a pre-disturbance map of each site. Semi-permanent primary site datum points will be established with rebar and capped and labeled with the site number and date. All subsequent intermediate datum points will be established in the same grid and coordinate system, and measured relative to the main site datum points. All features, tests, excavation units and *in situ* artifact point proveniences will be recorded with total station as well. Positional data collected at each site will be used to determine contextual relationships among artifacts and features. Distribution maps can potentially be used to ascertain possible uses of space within the excavated areas. Mapping and spatial distribution files will be compatible with ESRI GIS (Type ArcGIS).

Excavation units measuring either 3.3 ft x 3.3 ft (1 m x 1 m) or 3.3 ft x 6.6 ft (1 m x 2 m) will be placed based on visible surface features and knowledge of the site gained through previous testing. All units will be hand excavated using trowels and dustpans. Excavated sediments will be screened through a ¼-inch mesh screen, as possible. Bulk soil samples will be collected for flotation from within features and under cabin floors. Stratigraphic profiles and descriptions will be provided for all units and tests. Stratigraphic, sediment, and soil descriptions will follow national conventions established by the US Department of Agriculture Soil Survey (Soil Survey Division Staff 1993).

Recovered artifacts will be bagged in the field and all bags labeled with the following information: unit, level, depth below unit datum, date, excavator, contents, site number, field specimen and/or total station shot number (when applicable). Artifacts will be examined and described in the CSR's or selected consultant's lab and comparisons to other collections will be possible at facilities such as the University of Alaska Museum and the University of Alaska, Anchorage, Anthropology Laboratory. All artifacts will be measured, described, and photographed. Organic artifacts will be conserved using appropriate techniques, which will be followed after consultation with curatorial personnel.

After thorough documentation, common function and type mass-produced twentieth century artifacts will be reduced to a sample collection in the lab for later comparative study or museum display. Artifacts and non-artifact samples curated will be accessioned to the appropriate curation facility. Cataloguing, processing, and collections transfer will occur after the analysis and final reporting are complete (see Curation Agreement, Exhibit A).

Digital photography will be used to record all phases of the project, from mapping and excavation through artifact analysis and documentation. All photographs taken in the field will be recorded in photograph logs that are later digitized.

6.4.3 Lithic Scatters - Methods for Spatial and Laboratory Analysis

One eligible (IDT-00288) site comprises an extensive surface scatter of lithic materials. While small amounts of material were found in a subsurface context, the majority of material was exposed on

the surface and collected. Suggested mitigation strategies at this site are focused on spatial analysis of recovered materials and laboratory analysis of the artifacts themselves.

Contextual data derived from spatial relationships is among the most important sources of evidence for interpretations of ancient human behavior, social organization, site-formation processes, and the meaning of the archaeological record. The retrieval of archaeological information from various types of spatial relationships is thus a central aspect of the discipline. The distribution of, and relationships between artifacts, features, and other observable data have meaning in terms of activity areas, the organization of households, camps and larger settlements, and human use of landscapes (Banning 2000; Clark 1977). Deetz (1967) defined an archaeological site as a "spatial concentration of material evidence of human activity." At a large scale, the IDT-00288 site – largely consisting of a surface flake scatter and other ephemeral remains – can be best understood by applying inter-site comparative analyses examining landscape variables such as altitude, aspect, local environment, surficial geology, distance to seasonal or perennial water sources, and distance to similar sites. Within the site, intrasite spatial patterning will be considered: spatial clustering (density patterning) and compositional patterning (Ferring 1984).

Laboratory analyses of the recovered lithic materials will consist of both macroscopic and microscopic inspection and description, to gain an understanding of their procurement, manufacture and use (cf. Andrefsky 1998). Results of laboratory and spatial analyses will be collated to provide contextual interpretation of the IDT-00288 site.

6.4.4 Sites Requiring Further Phase II Testing

One prehistoric site (SLT-00094) is in close proximity to the planned Jungjuk Port site. Further Phase II testing is recommended for the site to better ascertain and delineate the extent of site deposits. This testing may in effect constitute data recovery mitigation if it is determined by USACE, through consultation with SHPO and the Crooked Creek Traditional Council, that further data recovery is not necessary. SLT-00094 has already been the subject of a multi-season community archaeology project involving participation of local residents (Hays et al. 2012b; Rogers et al. n.d.), and continuation of this approach is proposed under Alternative Mitigation (Section 6.5).

6.5 Alternative Mitigation

The Section 106 mitigation phase presents unique opportunities to integrate traditional and cultural knowledge with western science and technology. DuVall (2014) notes the trend in cultural resource management toward alternative or creative mitigation approaches.

Section 106 does not "prescribe" any specific formula or recipe for mitigating adverse effects. Mitigation can (and does) involve a variety of alternative forms in addition to mitigation through data recovery, involving traditional archaeological research designs and scientific methods. Alternative mitigation treatments may include active preservation in place for future study, recovery or partial recovery of archaeological data, public interpretive display, collections return/repatriation, virtual (Web-based) reports and museum displays, development of educational curriculum packages, community archaeology projects, public lectures, or any similar or combination of these and other measures. Alternative or creative mitigation plans may be developed through consultation with consulting parties actively providing input on culturally appropriate and locally valued options.

The terms alternative, or “creative mitigation" are terms used in this plan simply within the context of having the ability to spot problems and devise appropriate solutions.

6.5.1 Iditarod National Historic Trail

Donlin Gold has proposed the following mitigation measures to address adverse effects to the INHT. Review, consideration, and acceptance of these measures is pending.

The following are creative mitigation measures associated with the construction and operation of the proposed natural gas pipeline, to mitigate adverse effects to the INHT:

- Visual Documentation – Donlin Gold will collect photo and video documentation using modern technology in a user-friendly format of the INHT scenic area during winter conditions from the Skwentna Crossing to Three-mile Creek, and at Egypt Mountain. The documentation will be compiled in a report and copies provided to the signatories to the PA and to the Iditarod National Historic Trail Alliance (INHTA).

- Material Site MS-25 – During detailed construction planning, the need to develop Material Site 25 (MS-25) will be reevaluated. MS-25 may not be required and thus, not developed. If required, Donlin Gold will investigate means to minimize adverse effects by reducing the area of disturbance of the material site. If developed, MS-25 will be reclaimed by re-contouring the area to blend with the surrounding environment and methods would meet State of Alaska reclamation requirements. Visual barriers may also be installed, depending on the final configuration of the development at MS-25.

- Communication and Coordination – Donlin Gold will communicate through meetings, phone, and email and coordinate with INHT trail users (including the Iditarod Trail Committee and the Iron Dog) about pipeline construction plans and progress to enable free and safe passage at INHT/construction ROW crossings. Through its Public Outreach work, Donlin Gold will also provide information regarding pipeline construction and maintenance activities via its newsletters, webpage, and other social media.

Additional alternative mitigation measures to address adverse effects to the INHT are currently being proposed by Donlin Gold for review and consideration.

6.5.2 Angyaruaq SLT-00094

A Community Archaeology project conducted with Crooked Creek residents at SLT-0094 (the Angyaruaq site, see Section 6.6.2) resulted in scientific collections including a number of stone tools dating from roughly 2000 years ago. The most visually appealing artifacts include inset blades/arrow points, bi-points and bifaces manufactured from obsidian, chert and basalt. Donlin Gold will coordinate and fund the fabrication of 3 sets of lithic casts of select items. These three-dimensional artifact replicas can be used as part of teaching collections for scientific studies and/or as art objects for cultural displays. The following artifacts may be replicated:

- SLT-094-06-061 biface/end scraper

- SLT-094-06-059 biface (obsidian)

- SLT-094-10-027a inset blade/arrowpoint (obsidian)

- SLT-094-09-0299 knife blade fragment (black chert)
- SLT-09-0308 bipoint (basalt)

One set of replicas will be provided to Johnny John School in Crooked Creek for use as cultural and scientific teaching tools, and the other two sets will be provided to the land owners (TKC and Calista Corporation) for use in cultural collection displays.

6.6 Alternative Mitigative Activities Conducted to Date

Donlin Gold has been pro-active and accomplished certain activities to address potential project effects through three specific projects: Crooked Creek Repatriation, Angyaruaq Community Archaeology, and the James L. McPherson 1914 Kuskokwim Reconnaissance Historic Iditarod Trail Photo Mapping and Digitization Project. This work was conducted prior to the initiation of formal Section 106 consultation. Nevertheless, it was done in cooperation with several of the most directly affected communities and in collaboration with private landowners and the Crooked Creek Traditional Council. Although the projects were not codified in any specific 106 agreement (due to being completed early in project planning), they were done with the full knowledge and involvement of the SHPO, the relevant local community members and authorities, as well as the applicant. The information generated by these activities is available to use by consulting parties and agencies as more formal mitigation efforts proceed. These efforts are described here.

6.6.1 Crooked Creek Repatriation

During initial discussions regarding human remains protocols and other issues, Donlin Gold's contract archaeologist, Mr. Chris Wooley, asked if the Traditional Council had been contacted by any museums that may have collected any artifacts or human remains from their village. Smithsonian Physical Anthropologist Ales Hrdlicka's book, *Alaska Diary* (Hrdlicka 1943), referenced him taking remains of a single adult female from the Parent's Trading Post property at Crooked Creek (the family home site of Mrs. Thomas, a Crooked Creek resident). Repatriating the remains was an important community objective. In July 2007, discussions with Mrs. Thomas and former Donlin Gold representatives Mr. Nick Enos and Mr. Stan Foo resulted in a proposal to assist the Traditional Council's work with the Smithsonian Repatriation Office to get the remains repatriated. In March 2009, Mr. and Mrs. Thomas, accompanied by Mr. Wooley, travelled to Washington D.C. and returned to Alaska with the remains which were re-interred at Crooked Creek later that month. This process is documented in: *Return with a Sharing: Coming Home to the Kuskokwim* published in the Alaska Journal of Anthropology (Wooley and Thomas 2010).

6.6.2 Angyaruaq Community Archaeology

The community archaeology project at Angyaruaq, conducted by NLUR and Chumis with support from Donlin Gold, provided valuable initial mitigation (Hays et al. 2012). The fact that obsidian found at the site had originated many hundreds of miles away was discussed and the site and the ancestors' ability to flourish in the distant past became a topic of local pride. It became apparent that the site location was significant to the community of Crooked Creek because of its position between two traditional cultural sites: Uguohaydok Ridge and Angyaruaq (Canoe Mountain). These two landforms and their accompanying oral accounts speak to the origins of the local cultural groups. Local residents and the project staff integrated science, technology, and traditional knowledge as they investigated how ancient people lived 2,000 years ago. Interest in, and excitement about, investigating these and other aspects of the past at Angyaruaq has provided many tangible and intangible benefits to the community, the project, and the individuals involved.

The entire process of working with the Crooked Creek Tribal Council and landowners, requesting input on project activities, and hearing feedback on local concerns about cultural resources, has fostered an understanding of the broader ancient and contemporary cultural contexts of the site. Because of the recent cooperative effort in soliciting and exchanging information, much more is known today about the cultural and environmental context of Middle Kuskokwim River cultural resources.

Hrdlicka's insensitive collecting of human remains set the wrong precedent for archaeologists working locally (Wooley and Thomas 2011). However, the Crooked Creek Tribal Council and area residents have asked their own questions about the past and have actively addressed the cultural aspects of human history in the area. The process of addressing scientific and oral historical questions about the origins of the people living at Angyaruaq over 2,000 years ago has formed a unique bond among the researchers and the community and has resulted in a trust relationship that will help facilitate cooperative, creative, and effective mitigation of any potential adverse effects of the Donlin Gold project on the Angyaruaq site.

Community archaeology combined science (with modern technological applications) and tradition (with cultural training and instruction from key Tribal members). This combined approach supports the goals of professional archaeologists to understand and preserve the past. In addition, the combined science/tradition approach helps tribal hosts/neighbors to become familiar with environmental science, and increases cultural pride by knowing more about their cultural heritage.

6.6.3 James L. McPherson 1914 Kuskokwim Reconnaissance Historic Iditarod Trail Photo Mapping and Digitization

As a result of archival research supplemental to the gas pipeline corridor field surveys, Mr. Josh Reuther (Northern Land Use Research Alaska, LLC [NLURA]) identified an unpublished collection of Iditarod Trail-related historic photographs at the University of Washington Allen Library Special Collections. In collaboration with the University of Washington, NLURA, and Chumis Cultural Resource Services, Donlin Gold funded research and digitization of the collection associated with the 1914 Kuskokwim Reconnaissance conducted by James L. McPherson for the Alaska Engineering Commission. This material was presented to the Iditarod Historic Trail Alliance and BLM and is available online at:

http://content.lib.washington.edu/alaskawcanadaweb/kuskokwim.html.

This effort has resulted in the wider availability of this important historical data for use by the public and particularly by trail history enthusiasts.

6.7 Final Disposition of Recovered Archaeological Materials

Archaeological materials (artifacts, faunal materials, and/or samples) collected during any project phase are the property of the appropriate state or federal land managing agency, or private landowner. Federal and state agencies are bound by a requirement that the collection for which they are responsible only go to facilities that meet the curation guidelines of the Secretary of the Interior's guidelines for Archaeological Curation in 36 CFR 79. Although Donlin Gold encourages the curation for all archaeological materials, private landowners are not bound by these requirements and are free to choose alternative methods of final disposition. As applicable, Donlin Gold will consult with private land owners with regards to the final disposition of recovered archaeological materials. Curation agreements are included in Appendix A and would be finalized at least six months prior to commencement of construction. Curation may also be used as an

interim repository of archeological materials prior to the selection of alternative disposition methods by the private landowner.

6.7.1 Curation

The University of Alaska Museum of the North meets the federal guidelines for archaeological curation, and is the chosen curation facility for both federal and state agencies. Long-term curation arrangements are being worked out in consultation with private landowners (Exhibit A, Curation Agreement).

6.7.2 Alternative Disposition Methods

Possible alternative disposition methods for archaeological materials may include:

- Re-interment – Archaeological materials may be reinterred at the location found. This option may not be practical for improved or construction sites.

- Return - Archaeological materials may be returned/handed to the landowner for their safekeeping, or other.

- Alternative Repository – Archaeological materials may be permanently deposited at a facility that does not meet the federal guidelines of Archaeological Curation. Examples include:

    - Yupiit Piciryarait Cultural Center and Museum, Bethel.

    - School or village display cases.

7.0 UNANTICIPATED DISCOVERIES[3]

If an unanticipated discovery of potential cultural materials is made, Donlin Gold shall stop work in the immediate vicinity of the discovery and proceed in a manner consistent with this plan.

- Stop Work: Ensure construction activities that may affect the resource will cease without delay; work that does not affect the resource may continue. The CRS will be notified of the potential discovery of cultural materials.

- Site Protection: Protect the discovery site against further disturbance pending the following actions.

- Initial Evaluation: The CRS will complete an initial evaluation of the discovery and evaluate if the finding is indeed a cultural resource. If the finding is not a cultural resource, construction activities at the site will be allowed to resume.

- Initial Communication: The CRS will notify the USACE, the SHPO, and appropriate land owner(s) (parties) of the discovery within 24 hours, in accordance to Table 7-1 and Table 7-2. The initial notification of unanticipated discoveries should include available information regarding the nature and extent of the cultural materials and the site coordinates. The CRS will coordinate contact with local Tribal representatives, as available, when archaeological resources or human remains have been, or are anticipated to be, discovered (See also Section 6.3).

- Site Evaluation and Follow up Communication: The CRS will evaluate the find, assess its potential significance (eligibility for the National Register of Historic Places), and notify the parties as to the nature and potential significance of the discovery within 72 hours.

- Consultation and USACE Determination: The parties shall consult, by telephone or other means, on the nature and potential significance of the discovery and whether any additional investigation is warranted. A decision shall be provided to Donlin Gold no later than within two (2) working days following consultation.

    - If the USACE determines, in consultation with the SHPO and the landowner, that the discovery is not significant (not eligible for the NRHP) and the SHPO concurs, verbal authorization to proceed may be given by the USACE. USACE shall provide written authorization to Donlin within 48 hours.

    - If the USACE determines that additional investigation is warranted, the parties will continue to consult to determine an appropriate level of effort to determine the NRHP-eligibility (significance) of the discovery. If the discovery is determined to be significant, the parties will determine whether effects upon it may be avoided or minimized sufficiently to not adversely affect the historic property. If effects may not be avoided or minimized, the parties will determine acceptable mitigation to offset the adverse effects anticipated, considering the nature and extent of the

[3] This section will be revised (expanded or contracted) according to treatment of the topic in the PA.

historic property. A decision shall be provided to Donlin Gold no later than within two (2) working days following consultation.

Table 7-1: Contacts to Notify in Event of Confirmed Find

Land Owner	Contact					
	USACE	BLM	OHA/SHPO	Calista	CIRI	TKC
Federal	(I)	(I)	(I)			
State of Alaska	(I)		(I)			
Calista	(I)		(I)	(I)		
CIRI	(I)		(I)		(I)	
TKC (surface)/Calista (subsurface)	(I)		(I)			(I)

(I) = Immediate report, as soon as knowledge of the potential discovery is made.

Table 7-2: Contact Information

Land Owner		Point of Contact	Mailing Address	Phone (Main)	Phone (Direct)	Phone (Mobile)	Email
USACE	Primary	Jamie Hyslop	Regulatory Division Alaska District U.S. Army Corps of Engineers JBER Anchorage, AK 99506	907-753-2768	907-753-2670		Jamie.R.Hyslop@usace.army.mil
	Alternate						
BLM	Primary	BLM Anchorage Field Office Archaeologist	4700 BLM Road Anchorage, AK 99507	907-267-1246	907-267-1341		jblanchard@blm.gov
	Alternate						
State of Alaska	Primary	Judy Bittner	550 West 7th Avenue Suite 1310 Anchorage, AK 99501	907-269-8721	907-269-8715		Judy.bittner@alaska.gov
	Alternate	Richard VanderHoek		907-269-8721	907-269-8728		Richard.vanderhoek@alaska.gov
Calista	Primary	Vice President of Lands	5015 Business Park Blvd Suite 3000 Anchorage, AK 99503	907-275-2800			
	Alternate						
CIRI	Primary	Vice President of Lands	725 E. Fireweed Lane Suite 800 Anchorage, AK 99503	907-274-8638			
	Alternate						
TKC	Primary	Vice President of Corporate Affairs	4300 B Street Suite 207 Anchorage, AK 99503	907-243-2944			
	Alternate						

7.1 Human Remains Plan of Action

- Prior to project ground-disturbing activities, all project personnel will receive appropriate training that includes guidance on proper reporting of inadvertent discovery of human remains.

- If human remains are found during any phase of project-related work, as soon as safe to do so, work will cease in their immediate vicinity and a 100-ft buffer zone will be flagged or fenced off to protect the remains. Donlin Gold's CRS, agencies, land owners, and tribal entities will be immediately notified as per Table 7-3 and as required in Article IX of the PA.

- The CRS will notify a peace officer (AST, Missing Persons Bureau) and the Alaska SME immediately after the discovery, as stipulated in AS 12.65.005. If the remains appear to be recent (less than 50 years old) in the judgment of the CRS, the Trooper and Medical Examiner will determine whether the remains are of a forensic nature and/or subject to criminal investigation. The local Village Public Safety Officer (VPSO) may also be notified.

- The Alaska SHPO will also be notified of any discovery unless circumstances indicate that the death or burial is less than 50 years old and that there is a need for a criminal investigation or legal inquiry by the coroner.

- If the human remains are found to be historic in nature, a qualified professional physical anthropologist with experience in the analysis of human remains will examine them to determine racial identity. The physical anthropologist shall document, analyze, and photograph the remains so that an independent assessment of racial identity can be made. The physical anthropologist shall be afforded no more than 30 days to conduct his or her analysis.

- For human remains and/or associated Native American cultural items on federal lands, this plan of action will include consultation with the appropriate tribe as mandated by 43 CFR 10.5. Consultation will facilitate proposed treatment of the human remains and determine who is entitled to custody of the human remains and other cultural items under NAGPRA so that the disposition process can be completed.

- If the unanticipated discovery consists of Native Alaskan human remains, Donlin Gold will consult with the Alaska SHPO, USACE, BLM, and appropriate Alaska Native organizations regarding measures to respectfully handle such a discovery. If it can be adequately determined that the identified human remains have affinity to any federally recognized Tribe(s), a reasonable effort will be made to identify, locate, and notify the Tribe. The appropriate Alaska Native regional corporations also will be contacted.

- If the human remains are not Native Alaskan, and a determination has been made by the Trooper and Medical Examiner that a death investigation is not warranted, Donlin Gold, in consultation with the medical examiner, will attempt to identify, locate and inform descendants of the deceased.

- Protocols on avoidance, minimization, or removal/recovery/relocation of remains will be determined in consultation with parties listed in Table 7-3 and relevant tribal entities.

- Written authorization in the form of a Burial Transit Permit from the Alaska Health Analytics & Vital Records (formerly the Bureau of Vital Statistics) shall be obtained prior to any excavation or re-interment of any human remains. In addition, clearance from the appropriate Native organization must be obtained prior to excavation or re-internment.

- After permission to resume project activities in the area has been issued by the USACE and SHPO, Donlin Gold will resume project activities

Table 7-3: Contact to Notify in Event of Human Remains Discovery

Land Owner	Entity to be Contacted							
	AST, Missing Persons Bureau/SME	*USACE*	*BLM*	OHA/ SHPO	Calista	CIRI	TKC	VPSO
Federal	(I)	(I)	(I)					(II)
State of Alaska	(I)	(I)		(I)				(II)
Calista	(I)	(I)			(I)			(II)
CIRI	(I)	(I)				(I)		(II)
TKC(surface)/Calista (subsurface)	(I)	(I)					(I)	(II)

(I) = Immediate report, as soon as knowledge of the discovery of potential discovery is made.

(II) = Contacting the VSPO is recommended if the human remains are suspected or known to be <50 yrs.

CONTACT INFORMATION FOR STATE OFFICIALS INVOLVED WITH HUMAN REMAINS ISSUES IN ALASKA

*Denotes suggested contact person in list below.

Alaska State Troopers, Missing Persons Clearinghouse:

Phone: (907) 269-5038
Fax: (907) 337-2059

Lt. Paul Fussey
Phone: (907) 269-5682
Email: paul.fussey@alaska.gov

*Malia Miller
Phone: (907) 269-5038
Email: malia.miller@alaska.gov

*After contact by phone, send email with relevant information and photos to Lt. Fussey and Malia Miller.

Alaska State Medical Examiner's Office:

* Reporting Hotline (Death Hotline) to speak with on-duty investigator.
Phone: (907) 334-2356
1-888-332-3273 (Outside Anchorage)

Stephen Hoage, Operations Administration
Phone: (907) 334-2202
Fax: (907) 334-2216
Email: stephen.hoage@alaska.gov

Dr. Gary Zientek, Chief Medical Examiner
Phone: (907) 334-2200
Fax: (907) 334-2216
Email: gary.zientek@alaska.gov

Alaska Office of History and Archaeology (State Historic Preservation Office):

Office Phone: (907) 269-8700
*State Archaeologist

Fax: (907) 269-8908
Email: oha.permits@alaska.gov

Health Analytics & Vital Records

For burial transit permits and disinterment/transit/reinterment questions:
*Registration Help Line
Phone: (907) 465-5423

7.2 Plan for Unanticipated Discovery of Paleontological Resources

Donlin Gold has developed this plan to establish procedures in the event that previously unreported and unanticipated paleontological resources are found by project personnel. Prior to ground-disturbing activities, project personnel will receive environmental training including guidance on identifying potential paleontological resources. Paleontological resources include (but are not limited to): fossils of terrestrial plants (macrofossils), brachiopods, gastropods, trilobites, corals, conodonts, graptolites, marine bivalves and other marine invertebrate fossils, terrestrial vertebrates, and tracks.

The proposed project includes various areas that are known or have the potential to contain paleontological resources. Paleontological resources could be expected in the form of fossils in bedrock as well as buried Pleistocene-age mammals such as mammoths and mastodons. Geologic formations containing vertebrate fossils are considered to be the most significant. Vertebrate fossils tend to be rare and fragmentary, and thus have greater scientific importance than the more common invertebrate and plant fossils. Both federal and state laws mandate the protection of significant paleontological resources on federally and state-owned lands. The following procedures will be followed if paleontological resources are encountered.

- Work will be immediately stopped if significant paleontological resources are discovered to protect the integrity of the find.
    - Significant Paleontological Resources are fossils and fossiliferous deposits, consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years) (SVP 2010)
- Donlin Gold's Environmental Department will be immediately notified. The notification should include a detailed description of the nature and extent of the paleontological resources and an accurate and precise location including GPS coordinates.
- A representative from Donlin Gold's Environmental Department will confirm the presence of paleontological resources. The finding will be documented with the following information: photographs, brief written description, exact location information, depth and apparent thickness of the stratum, local topography, and other pertinent conditions.
- Donlin Gold's Environmental Department will contact a qualified paleontologist (Paleontological Consultant) who will coordinate Donlin Gold's response to the find with the appropriate agency, landowner, or tribal entity as listed in Table 7-4.

Table 7-4: Contact List for Immediate Notification of Paleontological Resources Find

Land Owner	***Entity to be Contacted***					
	USACE	**BLM**	**State of Alaska**	**Calista**	**CIRI**	**TKC**
Federal	(I)	(I)				
State of Alaska	(I)		(I)			
Calista	(I)			(I)		
CIRI	(I)				(I)	
TKC(surface)/Calista (subsurface)	(I)					(I)

(I) = Immediate report, as soon as knowledge of the discovery of potential discovery is made.

- The Paleontological Consultant will immediately notify Donlin Gold's Environmental Department by telephone regarding the preliminary significance of the find.

- If the find has the potential to be significant, and continuing work may damage more of the find, then Donlin Gold's Paleontological Consultant will request recommendations from the appropriate parties regarding appropriate measures for site treatment. These measures may include:

  - Visits to the site by the appropriate federal land managing agency, SHPO, and other parties

  - Assessment of the find by a paleontologist for extent and significance

  - Preparation of a mitigation plan by Donlin Gold for approval by the appropriate federal land managing agency or SHPO

  - Implementation of the mitigation plan

  - Approval to resume work following completion of the fieldwork component of the mitigation plan.

- Once proper documentation and clearance has been obtained from the appropriate managing agency, Donlin Gold will resume operations.

8.0 REFERENCES

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Exhibit A – Curation Agreement(s)

Curation Plan – TKC/CALISTA/DONLIN

The Kuskokwim Corporation (TKC) and Calista Corporation (Calista) understand that with development on Donlin leased lands defined under the Surface Use Agreement (SUA 2006), archaeological materials may be discovered during the normal course of operations. As private landowners, TKC and Calista are not bound by the same regulations as Federal and State agencies under the Secretary of the Interior's guidelines, and understand that Donlin Gold LLC (Donlin Gold) needs direction from TKC and Calista in the event of an archaeological discovery. The intent of this document is to outline a process if archaeological materials are found during the normal course of work on TKC or Calista lands, in a manner that maximizes cultural protections as well as minimizes disruption to operations during development of the Donlin Gold Mine Project (Project).

1. TKC and Calista request and will provide in a timely manner a local native shareholder resource trained in identifying native cultural archaeological materials assist with site evaluation and accompany Donlin Gold's archaeologist when archaeological materials (Materials) are discovered. This resource will have Traditional Knowledge of the area as well as cultural training.
2. TKC and Calista require that all items which have cultural significance will be curated at Museum of the North in Fairbanks, AK, an accredited repository.
3. Calista and TKC will sign a Memorandum of Agreement (MOA) with the Museum of the North establishing a curational partnership. The MOA will outline the details of responsibility for:
    a. Accession
    b. Cataloging
    c. Numbering
    d. Packaging
    e. Documentation
    f. Delivery
    g. Letter of Review
4. After the Materials have been curated, TKC or Calista or both, may request Materials for display with an approved plan outlining procedures, location, timeline, and process of care for displaying the Materials. TKC and Calista will work cooperatively to establish such plan.
5. A Traditional Council or Tribe in the TKC or Calista region may request from TKC and/or Calista, Material(s) to display with a Traditional Council or Tribe approved plan outlining procedures, location, timeline, and process of care for displaying the Material(s). This request will be approved by a management team (Management Team) comprised of one member from TKC and one member from Calista. A policy for evaluation will be approved by the TKC and Calista Board of Directors, as necessary.
6. At the discretion of TKC and Calista, a digitally printed replica of the Materials may be more appropriate for display. These guidelines will also be incorporated into policy by the TKC and Calista Board of Directors, as necessary, and executed by management.
7. Exceptional circumstances for Reinternment or Return of Archeological materials can be considered by the TKC and Calista Board of Directors, as necessary, with a written request if ownership is identified other than TKC or Calista.

8. Donlin Gold will pay all reasonable fees associated with the curation, as well as any digital printing replication of any artifacts.
9. Human Remains- if human remains are discovered, TKC and Calista will be immediately notified by Donlin Gold and a stop work order will immediately commence. With written prior approval from TKC and Calista, Donlin Gold will continue and follow The Native American Graves Protection and Repatriation Act (NAGPRA) guidelines. TKC and Calista will be at all consultation meetings and planning and have final say for the appropriate action of treatment of any human remains and determination of custody. Final actions must be approved by the TKC Board of Directors after consultation with the appropriate Tribe or Traditional Council. Possible outcomes are reinternment, or return, or an alternative repository.

All actions must be done in a timely manner to minimize disturbance to Project operations.

Attachment A: MOA between TKC, Calista, and Museum of the North

MAVER CAREY Date
President/CEO
The Kuskokwim Corporation

ROSIE BARR Date
VP Lands and Natural Resources
Calista Corporation

ANDY COLE Date
General Manager
Donlin Gold LLC

MEMORANDUM OF AGREEMENT

THIS MEMORANDUM OF AGREEMENT ("MOA") is hereby made effective as of the _____ day of _____, 20___, and entered into by and between the University of Alaska Museum of the North ("AMN"); the "Collection Owners" which include The Kuskokwim Corporation ("TKC") and Calista Corporation ("Calista"); and Donlin Gold, LLC ("Donlin Gold").

I. PURPOSE
   a. This MOA provides procedures for effective museum curation and storage of Cultural Material collected or excavated by Donlin Gold's cultural resource consultants on lands owned by TKC and/or Calista.

II. DEFINITIONS
   a. "Cultural Material:" Historic or prehistoric remains of human activity as reflected in ruins, structures, objects, and artifacts; other remains found in archaeological context; and object or samples of contemporary esoteric value. This definition does not include actual human remains (e.g., human bones or teeth).

   b. "Accession:" An accession is a collection acquired from one source (site) at one time and can be comprised of one or many specimens. To accession is the formal process of accepting a new acquisition into the collections. A collection is not accessioned until it is physically deposited in the museum. When a collection is accessioned, the museum assumes a commitment to ensure the safe storage and availability for study and exhibition of that collection, in perpetuity or to the extent allowed by an agreement.

   c. "Cataloging:" The preparation of Cultural Materials for record by means of assigning each specimen, or collective "lot" of specimens or samples (e.g. charcoal, soil, wood, etc.), a unique catalog number assigned by the museum, and recorded in a corresponding database, each catalog number followed by a record of the appropriate contextual data associated with each specimen, or collective "lot" of specimens or samples, as recorded by the collector. At a minimum, this will contain the site name, date of acquisition, collector's name, excavation unit, United States Geological Survey ("USGS") quadrangle map with site designation, Alaska Heritage Resources Survey ("AHRS") number, and any other available provenience information.

   d. AMN is a permanent repository that meets federal guidelines as outlined in the Secretary of the Interior's guidelines for Archaeological Curation in 36 CFR 79. Federal agencies are bound by a requirement that the collection for which they are responsible only go to facilities that meet these guidelines. AMN possesses all of the following qualifications:

i. Ability to undertake responsible management of archaeological materials.
ii. A professional staff trained in museology, museum studies, anthropology, archaeology, and collections management.
iii. Capacity and willingness to protect archaeological materials from environmental damage, fire damage, theft, or loss through incompotent management or neglect.
iv. Adequate funding sources available.
v. Safe, secure, environmentally controlled facility.

III. TERMS

The Collection Owners and AMN mutually agree to promote a unified approach to issues relating to preservation and protection of Cultural Materials and agree to the following procedures, terms, and conditions:

a. AMN agrees to act as repository for the Cultural Materials recovered on TKC and Calista lands and to provide proper space, facilities and personnel for curation, storage, and maintenance of the material until such time as the Collection Owners request in writing a transfer of the collection to another repository or location. The Cultural Materials will be known as the TKC/Calista Collection.

b. Approximately 10 ft^3 of existing collections will be accessioned by the AMN (10 boxes measuring 1 cubic foot each). These collections are from different archaeological sites located on lands owned by TKC and Calista.

c. Donlin Gold assumes responsibility to pay for cataloging all recovered Cultural Materials in the TKC/Calista Collection in accordance with the Curation Guidelines of the Archaeology Department at AMN. All cataloging will be completed before depositing Cultural Materials in AMN.

d. Donlin Gold will retain all Cultural Materials collected until all necessary analyses and cataloging are complete.

e. Staff at AMN will promptly notify the Collection Owners if items in the TKC/Calista Collection show signs of deterioration. AMN staff will not alter, clean, consolidate, or treat with chemicals any TKC/Calista Collection objects without the prior written notification of the Collection Owners. It is understood that some items may have already been so treated or cleaned prior to being deposited at AMN.

f. Upon approval of the Collection Owners, AMN agrees to make the TKC/Calista Collection available for scientific study, teaching, and public observation. With final written approval from the Collection Owners, AMN will review and approve or deny requests from third parties for

access to or short-term loan of the TKC/Calista Collection (or a part thereof) for scientific, exhibit, or educational purposes. If requests arise for artifacts from the TKC/Calista Collection to be placed on loan, or significant consumptive uses of the collections (or a part thereof), AMN will promptly refer these requests to the Collection Owners for approval or denial. Significant intentional destruction is the consumptive use of 10 or more specimens for research purposes such as radiocarbon dating, isotope, residue, or DNA analyses. This testing is typically restricted to pieces of burnt wood or animal bones. Significant intentional destruction can also refer to less than 10 specimens if it is a one-of-a-kind, unique, or rare specimen that is requested for destructive analysis. The Collection Owners agree that AMN has certain non-exclusive rights for non-commercial purposes (educational/scholarly) and that part of normal and necessary professional curation may include photography of items from the TKC/Calista Collection or for the purposes of insurance, catalogs, collections management and/or public events or brochures.

g. AMN assumes no responsibility for Cultural Materials collected on TKC or Calista lands that have not been physically deposited in AMN or have been removed from AMN by the Collection Owners or their authorized representative.

h. All human remains (e.g. human bones or teeth), should any exist in the TKC/Calista Collection, are the responsibility of the Collection Owners and will not be curated at AMN unless mutually agreed by both TKC and Calista.

i. All records related to the TKC/Calista Collection will be deposited at the AMN at the same time as the TKC/Calista Collection. These records will include (but not be limited to) catalog ledgers and copies of all reports, papers, field notes, profiles, photographic negatives or transparencies and digital files. Catalogs will be provided as hardcopy and as Microsoft Excel computer files.

j. The Collection Owners and the AMN recognize that storage facilities and personnel support will be required to house and organize the TKC/Calista Collection following deposit at AMN. Donlin Gold will provide the published deposit fee (currently $575 per box) in support of curation and other costs associated with housing and organizing the approximately 10 ft^3 of collections.

k. The Curator of Archaeology and the Collection Owners will periodically review this MOA and make necessary adjustments. The procedures, terms, and conditions of this MOA may be modified at any time by joint consent of all parties.

l. The term of this MOA shall be from _____, 2017 until _____, 20__. Any party may terminate this MOA at any time by giving written notice to all other parties not less than 180 days in advance of the effective date of termination.

m. In the event that this MOA is terminated by any party, the cost of packing and shipping the TKC/Calista Collection that has been collected up to that date will be paid for and arranged by Donlin Gold.

n. TKC and Calista asserts that they are the legal owner/steward of the TKC/Calista Collection described in this MOA.

The Collection Owners agree to hold AMN harmless for any loss or damage to the TKC/Calista Collection.

/s/
JOSH REUTHER Date
Curator of Archaeology
University of Alaska Museum of the North

/s/
MAVER CAREY Date
President/CEO
The Kuskokwim Corporation

/s/
ALDONA JONAITIS Date
Interim Director
University of Alaska Museum of the North

/s/
ROSIE BARR Date
VP Lands and Natural Resources
Calista Corporation

/s/
ANDY COLE Date
General Manager
Donlin Gold LLC

Exhibit B – Potential Fossil Localities on Federal Lands

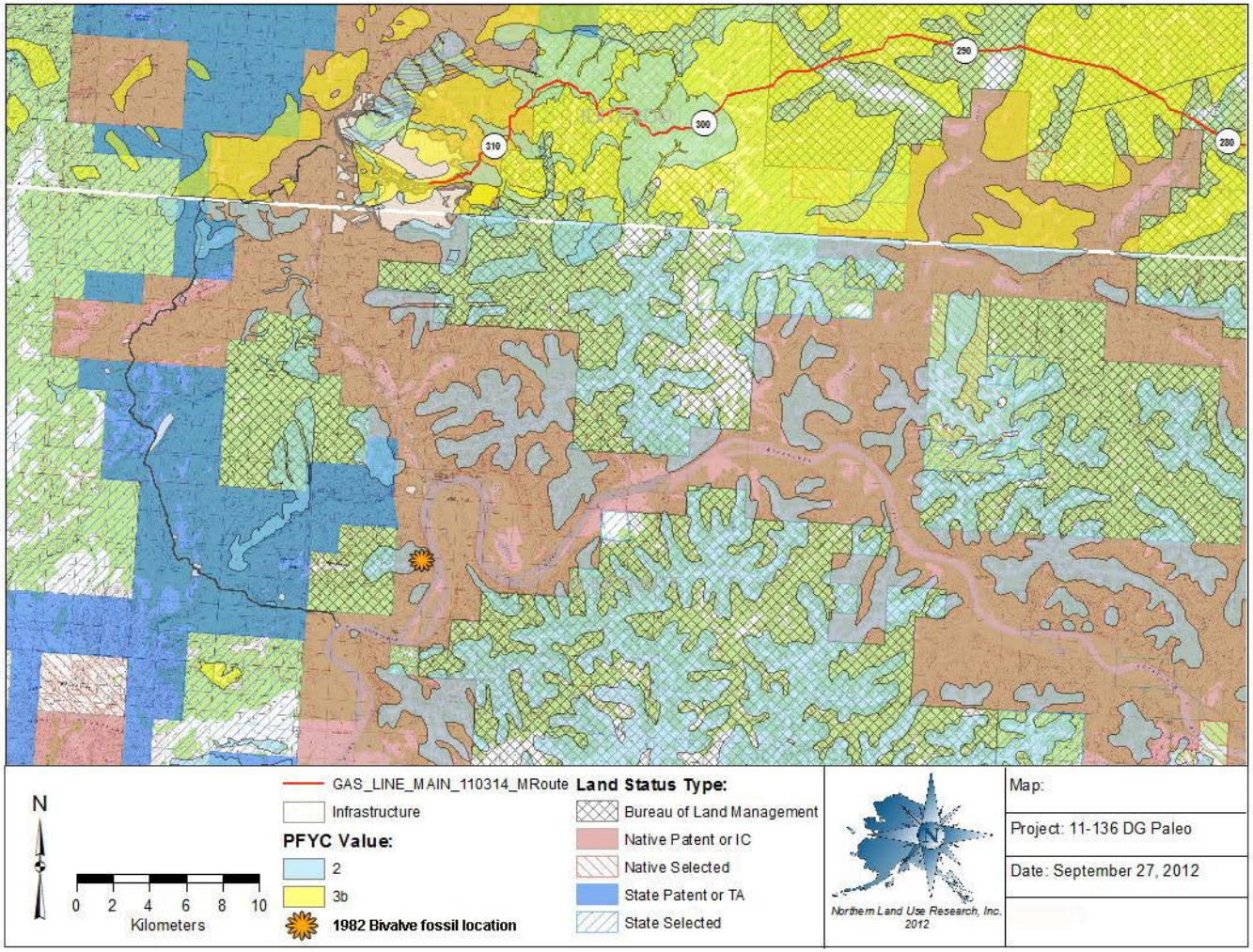
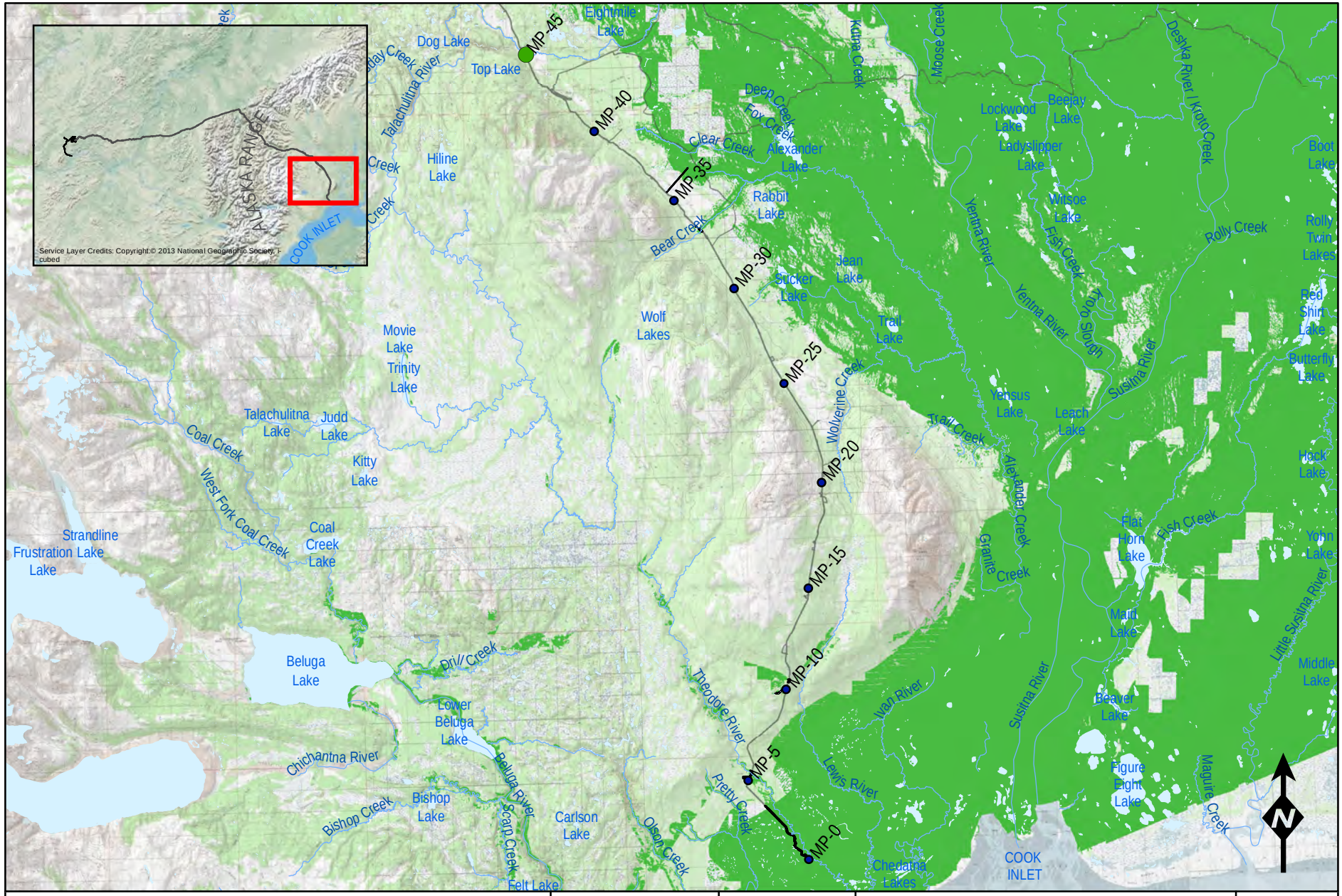


Figure B-1: View of the proposed Donlin Gold Mine Area and associated infrastructure and natural gas pipeline route, showing Probable Fossil Yield Classification (PFYC) values for fossil-bearing rocks in the area in the Iditarod and Sleetmute quadrangles. The star indicates the 1982 fossil collection site of marine bivalves (PFYC Class 2; Elder and Miller 1991).

Exhibit C – Potential Monitoring Areas



Milepost (MP-)

Project Footprint

Donlin Archaeological Predictive Model

High Potential Areas

SCALE:

0 1 2 4 mi

0 1.5 3 6 km

DONLIN GOLD

HIGH POTENTIAL AREA FOR UNANTICIPATED DISCOVERIES

DONLIN GOLD PROJECT

FIGURE:

1

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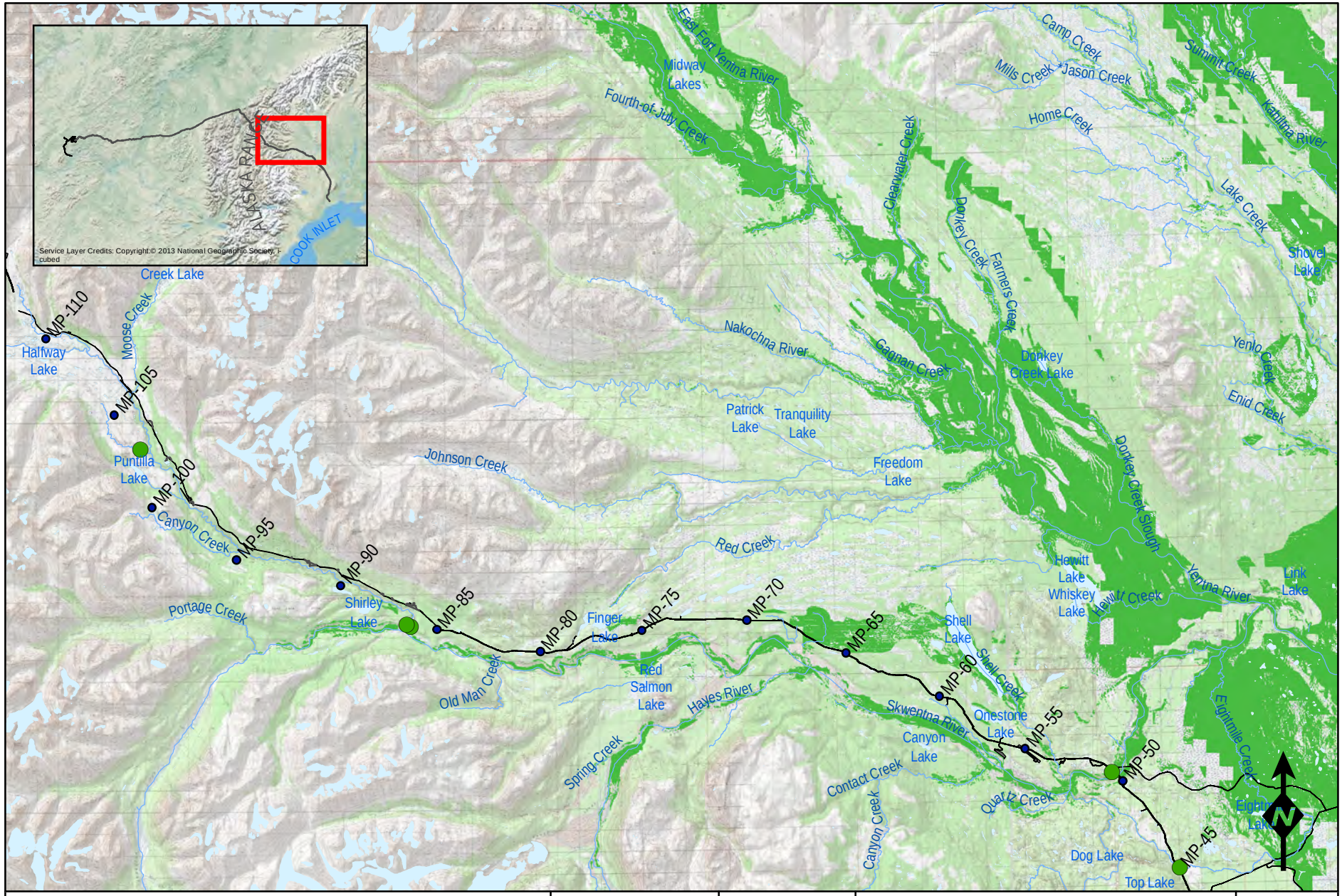

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Project Footprint

Donlin Archaeological Predictive Model

High Potential Areas

SCALE:

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DONLIN GOLD

HIGH POTENTIAL AREA FOR UNANTICIPATED DISCOVERIES

DONLIN GOLD PROJECT

FIGURE:

2

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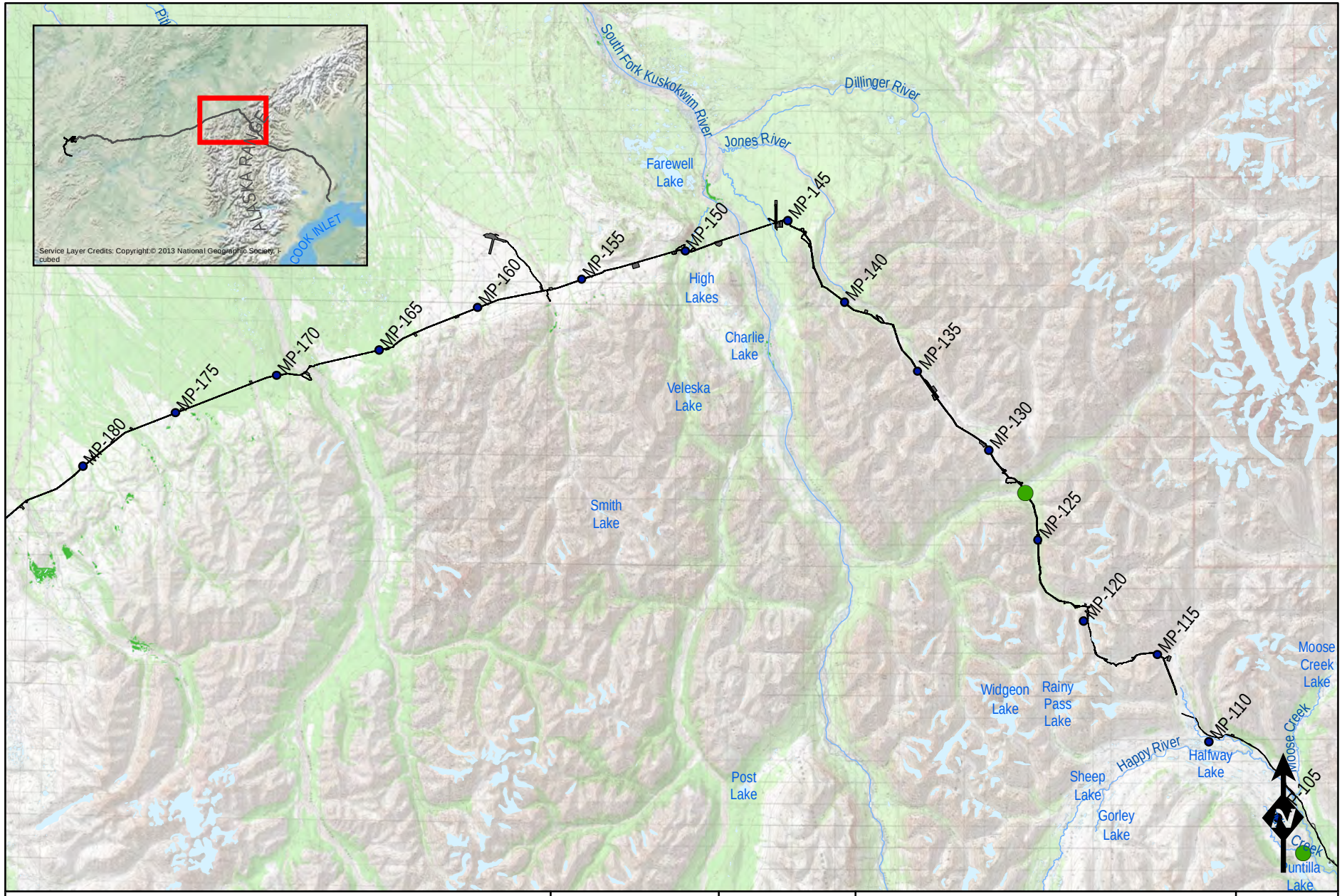

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Project Footprint

Donlin Archaeological Predictive Model

High Potential Areas

SCALE:

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DONLIN GOLD

HIGH POTENTIAL AREA FOR UNANTICIPATED DISCOVERIES

DONLIN GOLD PROJECT

FIGURE:

3

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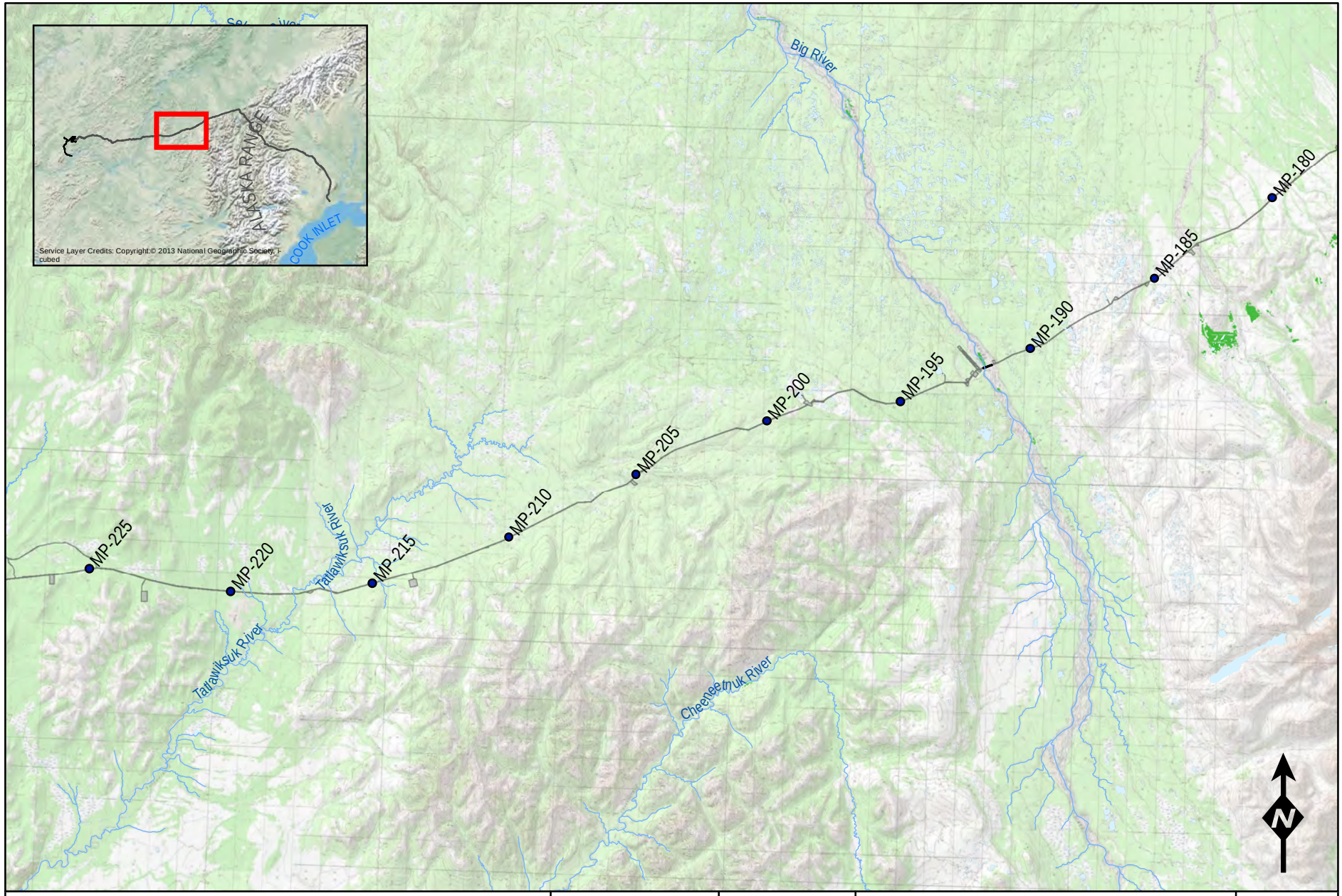

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Project Footprint

Donlin Archaeological Predictive Model

High Potential Areas

SCALE:

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DONLIN GOLD

HIGH POTENTIAL AREA FOR UNANTICIPATED DISCOVERIES

DONLIN GOLD PROJECT

FIGURE:

4

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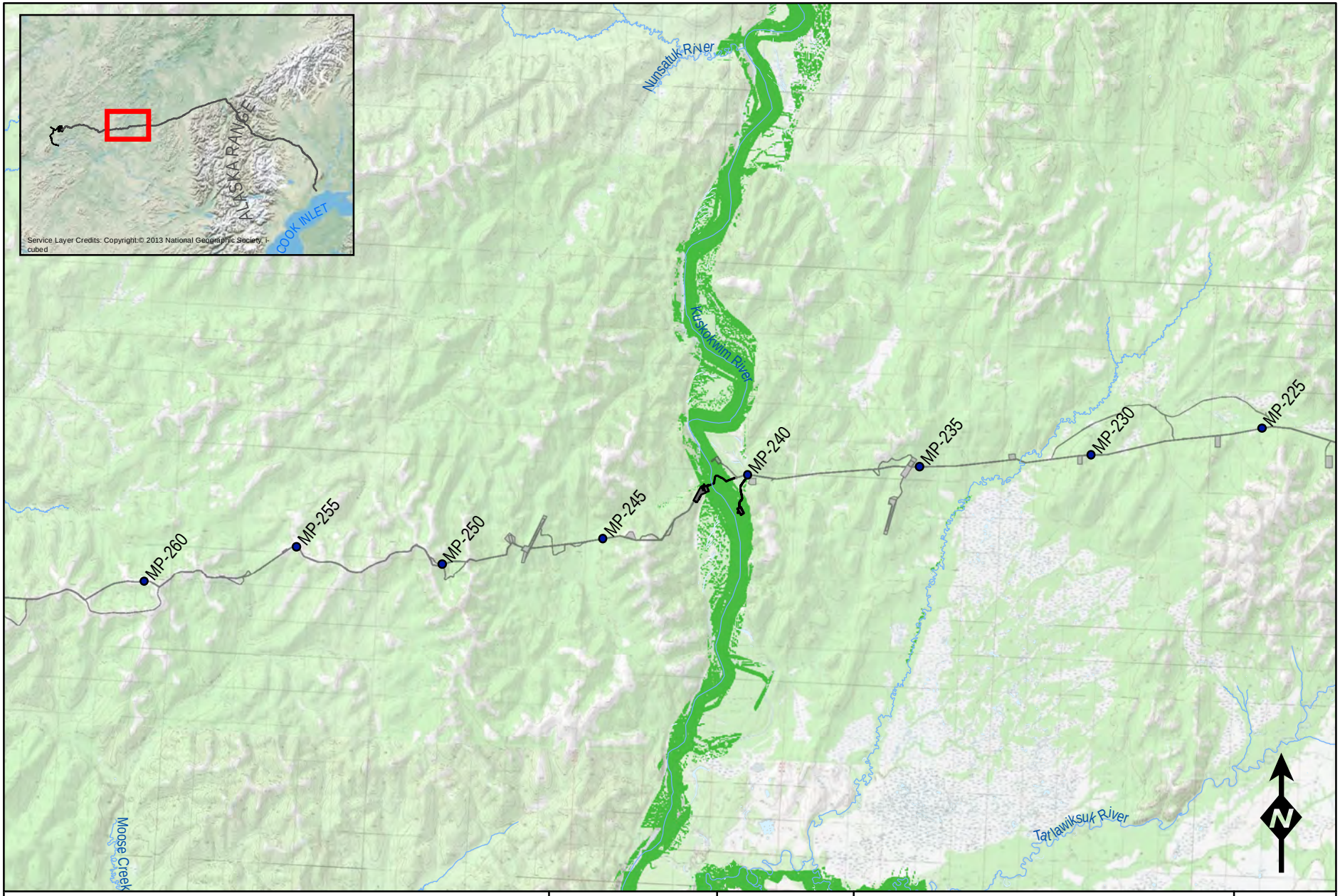

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Project Footprint

Donlin Archaeological Predictive Model

High Potential Areas

SCALE:

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DONLIN GOLD

HIGH POTENTIAL AREA FOR UNANTICIPATED DISCOVERIES

DONLIN GOLD PROJECT

FIGURE:

5

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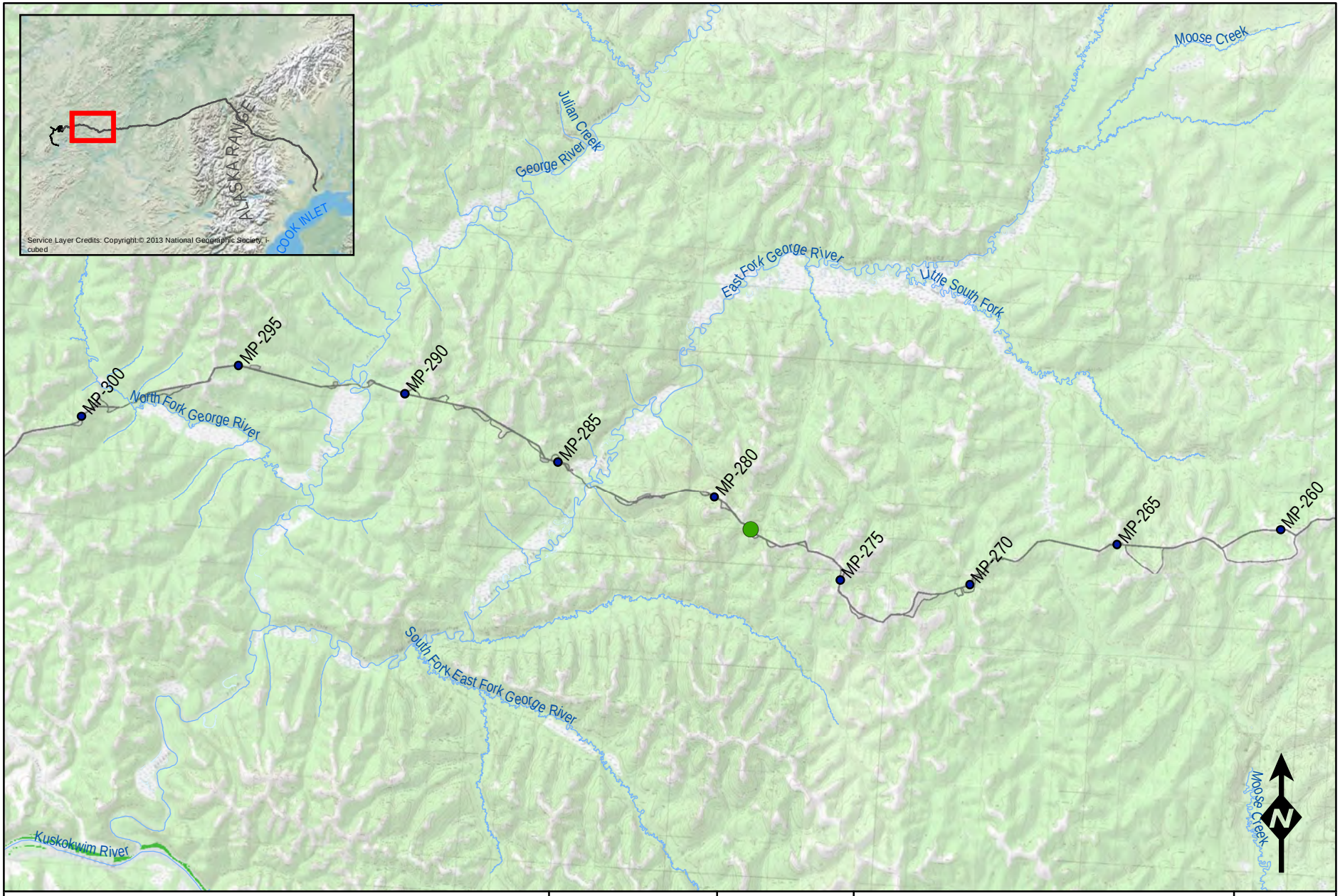

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Project Footprint

Donlin Archaeological Predictive Model

High Potential Areas

SCALE:

0 1 2 4 mi

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DONLIN GOLD

HIGH POTENTIAL AREA FOR UNANTICIPATED DISCOVERIES

DONLIN GOLD PROJECT

FIGURE:

6

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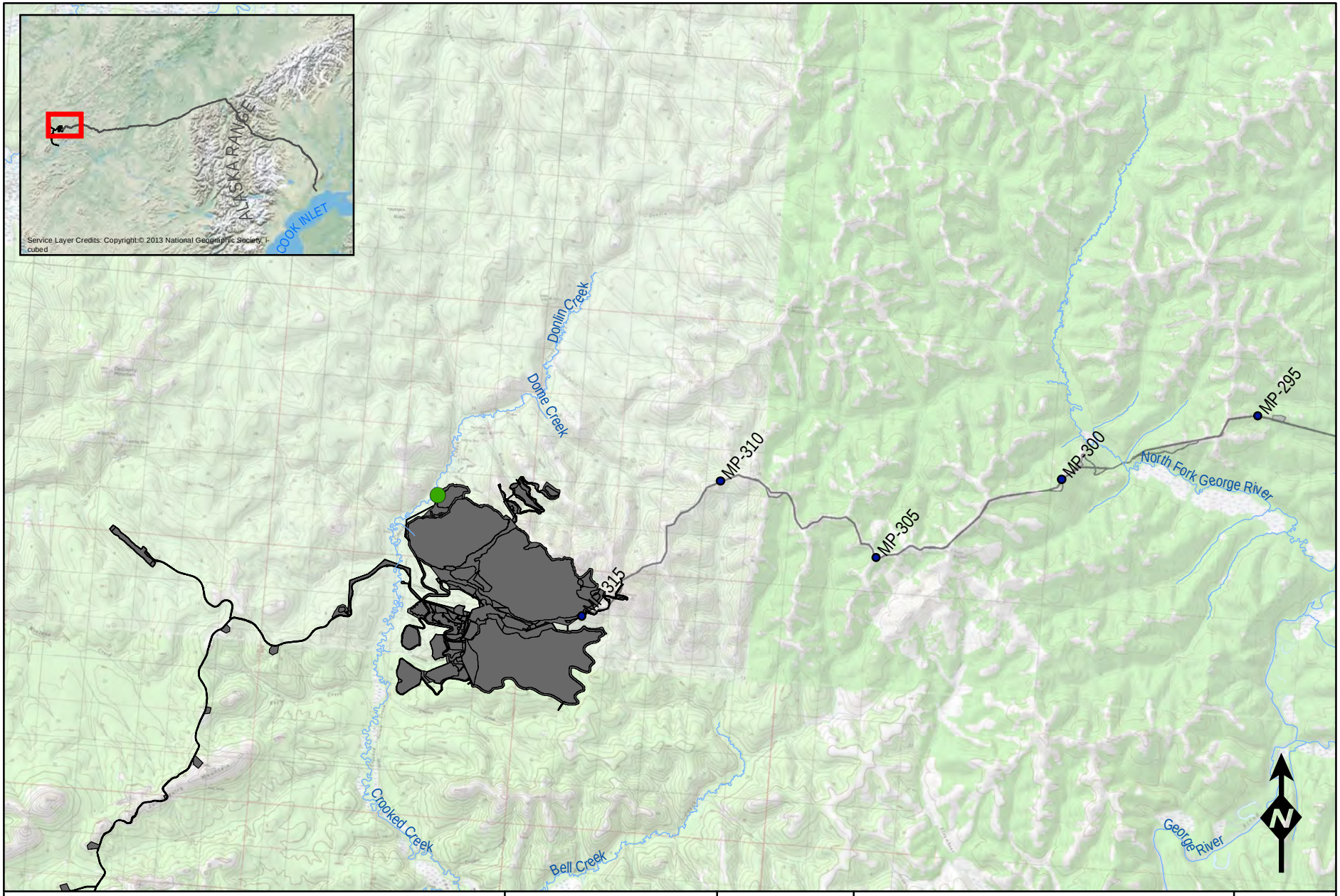


Milepost (MP-)

Donlin Archaeological Predictive Model

Project Footprint

High Potential Areas

SCALE:

0 1 2 4 mi

0 1.5 3 6 km

DONLIN GOLD

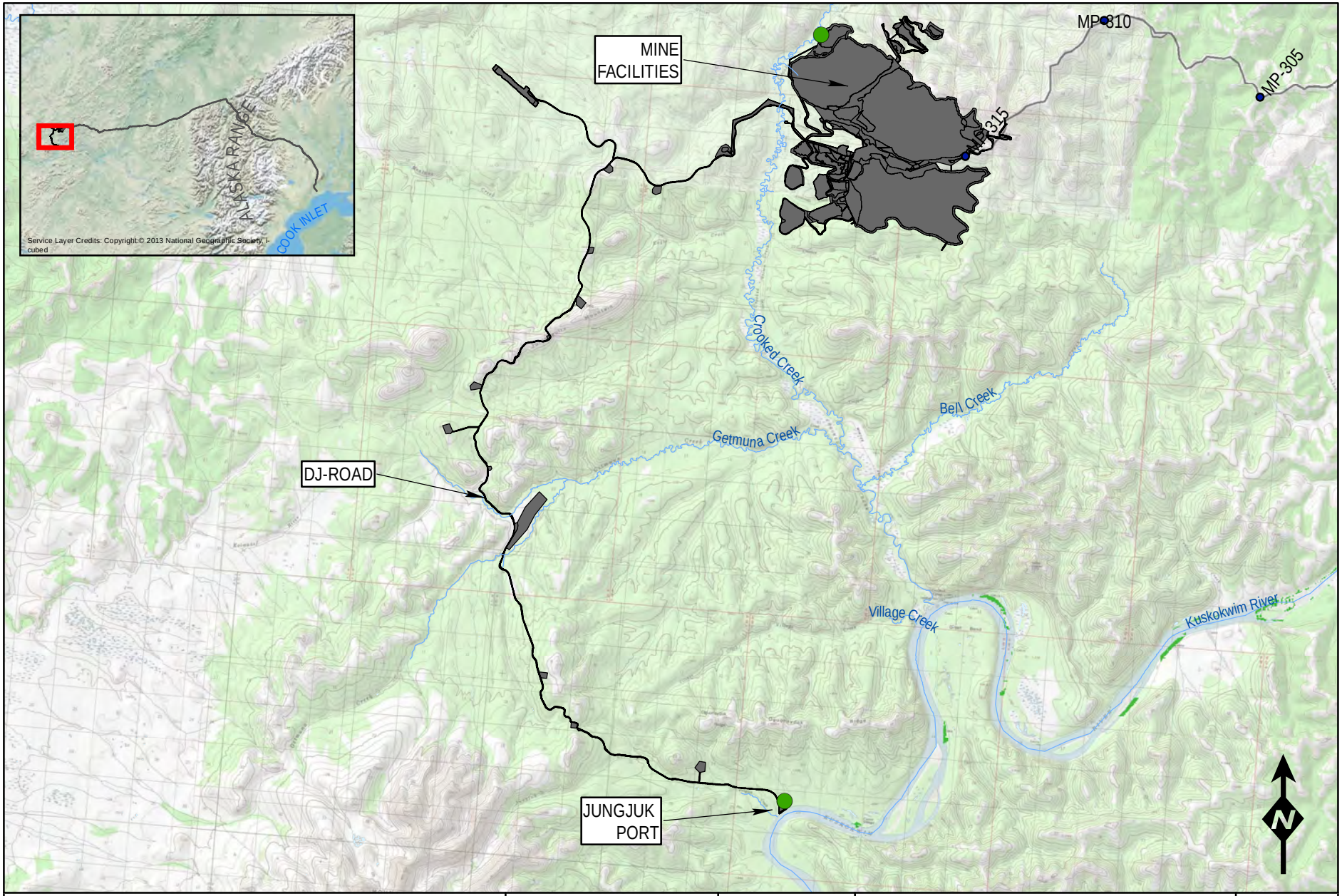
HIGH POTENTIAL AREA FOR UNANTICIPATED DISCOVERIES

DONLIN GOLD PROJECT

FIGURE:

7

DG: PER0574_G.mxd, 09/29/17, R00



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Project Footprint

Donlin Archaeological Predictive Model

High Potential Areas

SCALE:

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DONLIN GOLD

HIGH POTENTIAL AREA FOR UNANTICIPATED DISCOVERIES

DONLIN GOLD PROJECT

FIGURE:

8

DG: PER0574_H.mxd, 09/29/17, R00

Exhibit D – Monitoring Plan

Exhibit E – September 25, 2017 Meeting Summary

MEETING SUMMARY

METHODS TO AVOID OR MINIMIZE EFFECTS TO IDITAROD NATIONAL HISTORIC TRAIL

Donlin Gold Project

September 25, 2017

4720 Business Park Blvd., Suite G-25
Anchorage, Alaska 99503

INTRODUCTION

Donlin Gold[1] met on September 25, 2017 with board members of the Iditarod Historic Trail Alliance (IHTA)[2], Alaska Department of Natural Resources – State Historic Preservation Office (ADNR-SHPO)[3], and the Bureau of Land Management (BLM) Iditarod National Historic Trail (INHT) Administrator[4] personnel. This document captures and reinforces the information presented and discussed at the meeting.

The purpose of the meeting was to review and discuss potential adverse effects to the INHT as a result of the proposed construction of the Donlin Gold Natural Gas Pipeline (pipeline). The objectives of the meeting were to inform participants of the details of Donlin Gold's proposed pipeline facilities and location with respect to the INHT right-of-way (ROW), and to brainstorm ideas to further minimize or mitigate potential adverse effects. During the meeting, Donlin Gold personnel discussed measures proposed to date to avoid impacts to the INHT, with emphasis on the "North Route Option."

Information presented included spatial data of the proposed pipeline construction infrastructure disturbance limits and the State-surveyed INHT ROW limits displayed on top of high-resolution aerial photography, using ESRI© ArcGIS digital mapping software and a screen display.

The meeting provided a venue for new or enhanced understanding by participants about:

- the reduced number of pipeline ROW and INHT ROW crossings proposed with the North Route Option (reduced to four crossings)
- elimination of co-located trail and pipeline routing
- proximity of proposed facilities and markers to the INHT
- an understanding of the environmental setting at each crossing.

Participants had the opportunity to ask questions about pipeline construction, design, and maintenance and discuss potential and perceived adverse effects and potential avoidance or minimization through planning, design, construction practices, and communication.

CROSSINGS OF PROPOSED PIPELINE AND INHT ROW

The currently proposed pipeline route shares the landscape with the INHT through the Alaska Range passage in two general areas:

1) An area separated from, but parallel to, the trail roughly between the INHT Skwentna River crossing and the Threemile Creek valley (Crossings # 1, #2, and #3) (Figure 1)

[1] Dan Graham, Enric Fernandez, and Kurt Parkan
[2] Mark Nordman and Erin McLarnon
[3] Judy Bittner, Richard VanderHoek, and Mark Rollins
[4] Kevin Keeler

2) An area perpendicular to the trail on the north side of the Alaska Range, where the South Fork Kuskokwim River leaves the Alaska Range, near Egypt Mountain (Crossing #4) (Figure 1). The Iditarod National Historic Trail Comprehensive Management Plan describes the importance of the visual and perceptual aspects of these INHT segments and assigned them a "Class A" scenic quality category, because these areas "combine the most outstanding characteristics of each rating factor." In general, the Class A category includes landscape characteristics that result in the high quality of the natural views from the INHT.

ADVERSE EFFECTS TO THE INHT

The construction of the proposed pipeline will result in landform and vegetation modifications, and introduction of pipeline components and signage, that will cause adverse effects to the INHT. The majority of these effects will be visual. The key project elements causing these effects are: vegetation clearing along the pipeline ROW and introduction of required pipeline safety structures such as line markers, main line valves (MLVs), and cathodic protectors.

In forested areas, where the INHT and the pipeline ROW overlap, or where the cleared ROW is visible from the trail, impacts would occur as a result of a strong visual contrast against the existing landscape. These adverse effects would be reduced with the passage of time, as construction areas are recolonized by natural vegetation, but some would persist through the life of the project (e.g., regulations require brushing a portion of the 50-foot wide ROW to aid in pipeline location for safe operations). The INHT is passable only during the winter, when there is adequate snow cover on the ground and ice on streams and lakes for cross-country travel. The viewshed of the pipeline would generally blend with the surrounding landscape during winter due to snow cover, especially in areas with low shrubs, tundra, or unvegetated areas. However, line markers, MLVs, and cathodic protection devices may cause visual impact, because they would not likely be covered in snow.

In addition, construction activities have the potential to interfere with use of the INHT during scheduled events in the year of construction, such as the Iditarod Dog Sled Race, Iron Dog, and Iditasport.

AVOIDANCE AND MINIMIZATION OF EFFECTS

Adverse impacts to the INHT may be avoided or minimized through several means: route selection during design, construction methods, communication and coordination with INHT users.

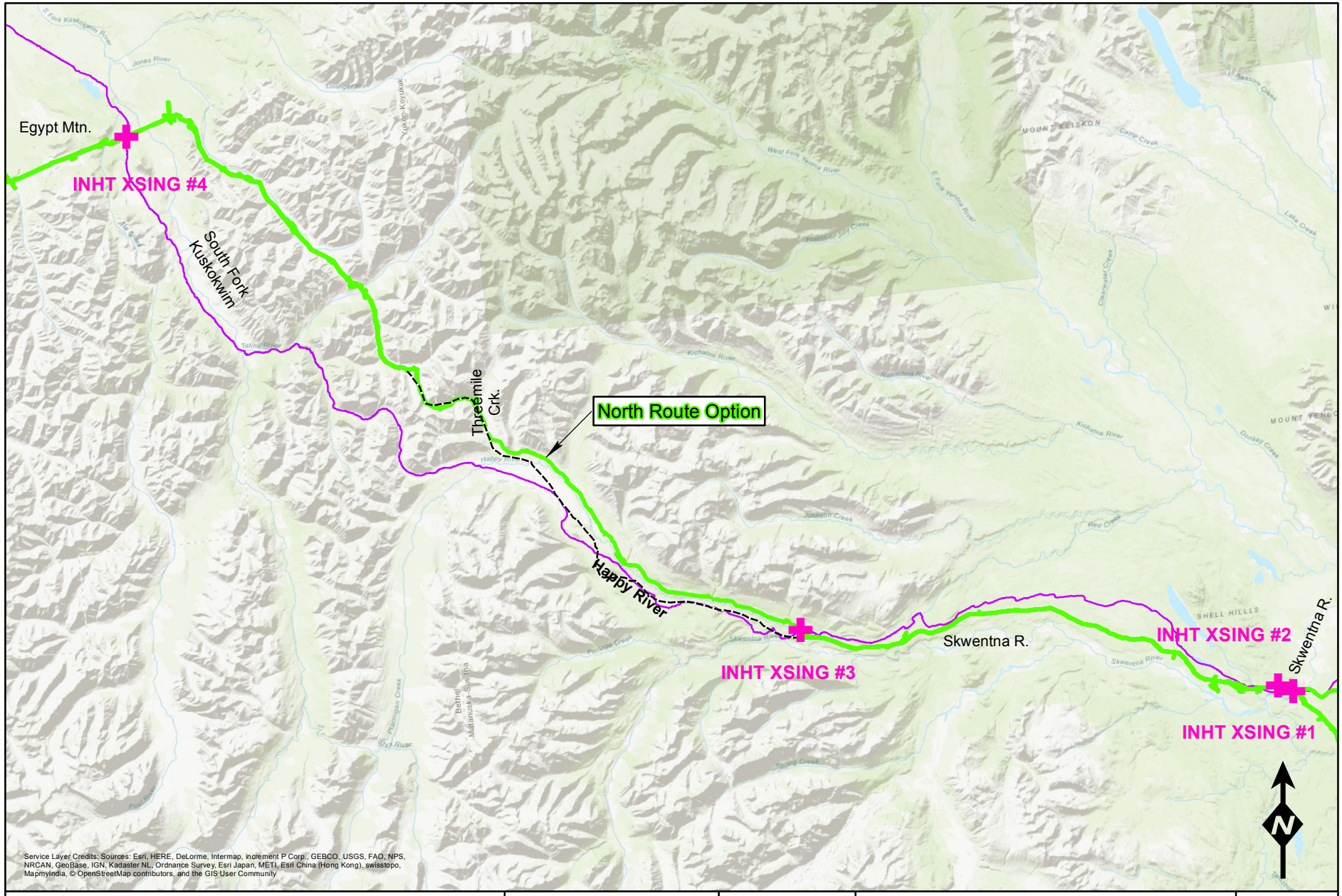
Design of Route Selection

Donlin Gold has studied various pipeline corridors that would avoid and/or minimize adverse effects to the INHT. The most significant route modifications are described below and have been incorporated into the proposed pipeline route shown on Figure 1:

- Jones Route Alternative – Selection of the Jones Route Alternative removed all contact between the pipeline ROW and the INHT through Rainy Pass north of Threemile Creek, Dalzell Gorge, Rohn Cabin, and South Fork Kuskokwim areas.

- North Route Option – Selection of the North Route Option relocated the proposed pipeline corridor from the south to the north side of the Happy River, from the junction of the Happy and Skwentna Rivers, to Threemile Creek. This alternative avoids adverse impacts to the Happy River Steps, eliminates a large number of crossings with the INHT, and eliminates several miles of INHT trail and pipeline ROW collocation.

With the project's adoption of the Jones Route and North Route changes, the number of INHT and pipeline ROW crossings has been reduced to four (4) (Figure 1): two (2) east of the INHT Skwentna River Crossing (Figure 2 and Figure 3); one (1) as the INHT approaches the Happy River Steps from the east (Figure 4); and one (1) near Egypt Mountain as the INHT leaves the South Fork Kuskokwim River Valley in the Alaska Range (Figure 5). This also eliminated several miles of co-located pipeline and INHT sections.



---- Former Proposed Route

Proposed Natural Gas Pipeline

INHT

Pipeline ROW and INHT Crossing

SCALE:

0 2.5 5 10 Miles

0 2.5 5 10 Kilometers

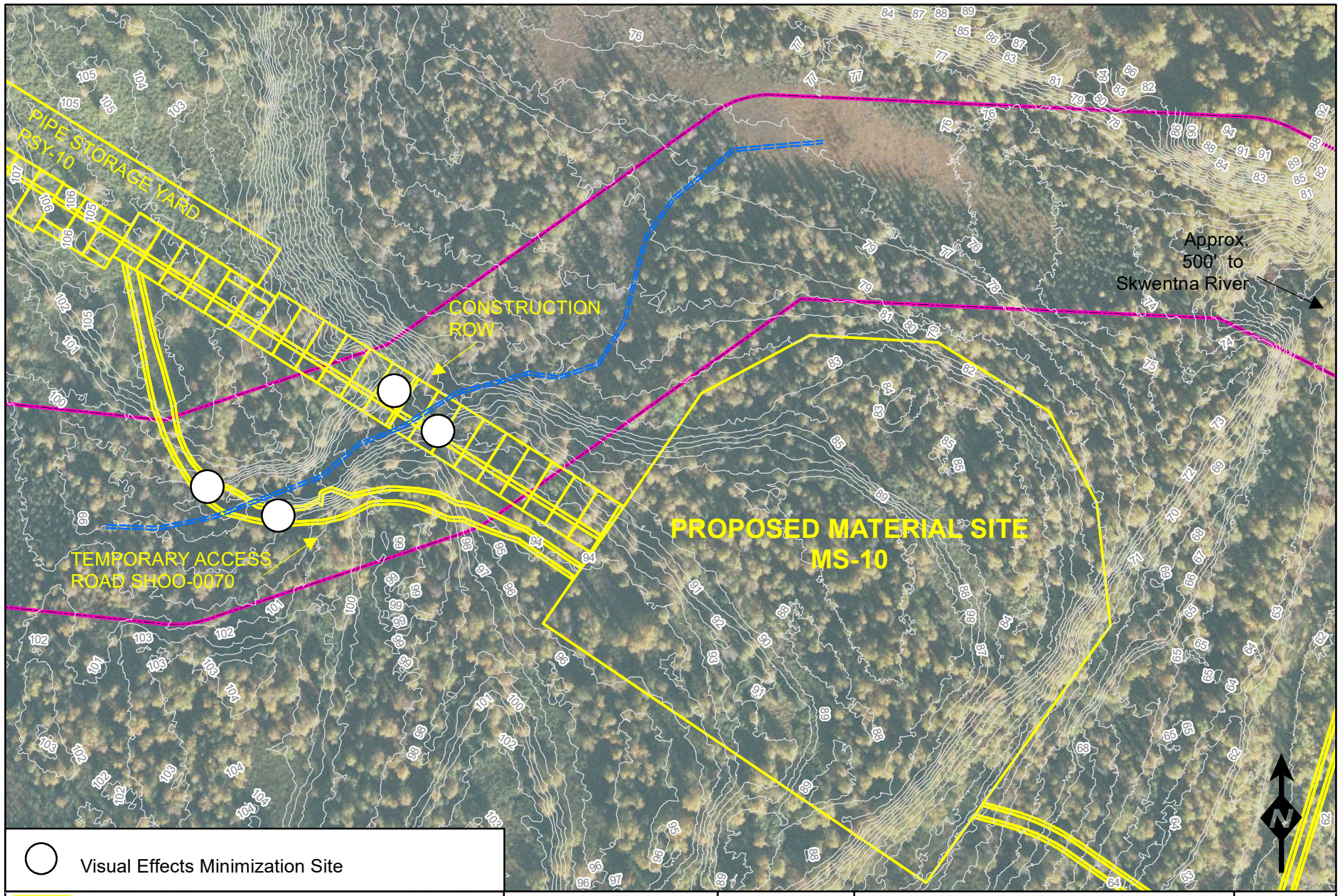
DONLIN GOLD

INHT and PIPELINE CROSSINGS

DONLIN GOLD PROJECT

FIGURE: 1

DG: XINGS Map.mxd, 10/09/17, R01



Visual Effects Minimization Site

Proposed Natural Gas Pipeline Construction Footprint

INHT, Public Access Easement (400' Wide)

Approximate INHT Location

Contour internval = 1m

SCALE:

0 50 100 200 Feet

0 12.5 25 50 Meters

DONLIN GOLD

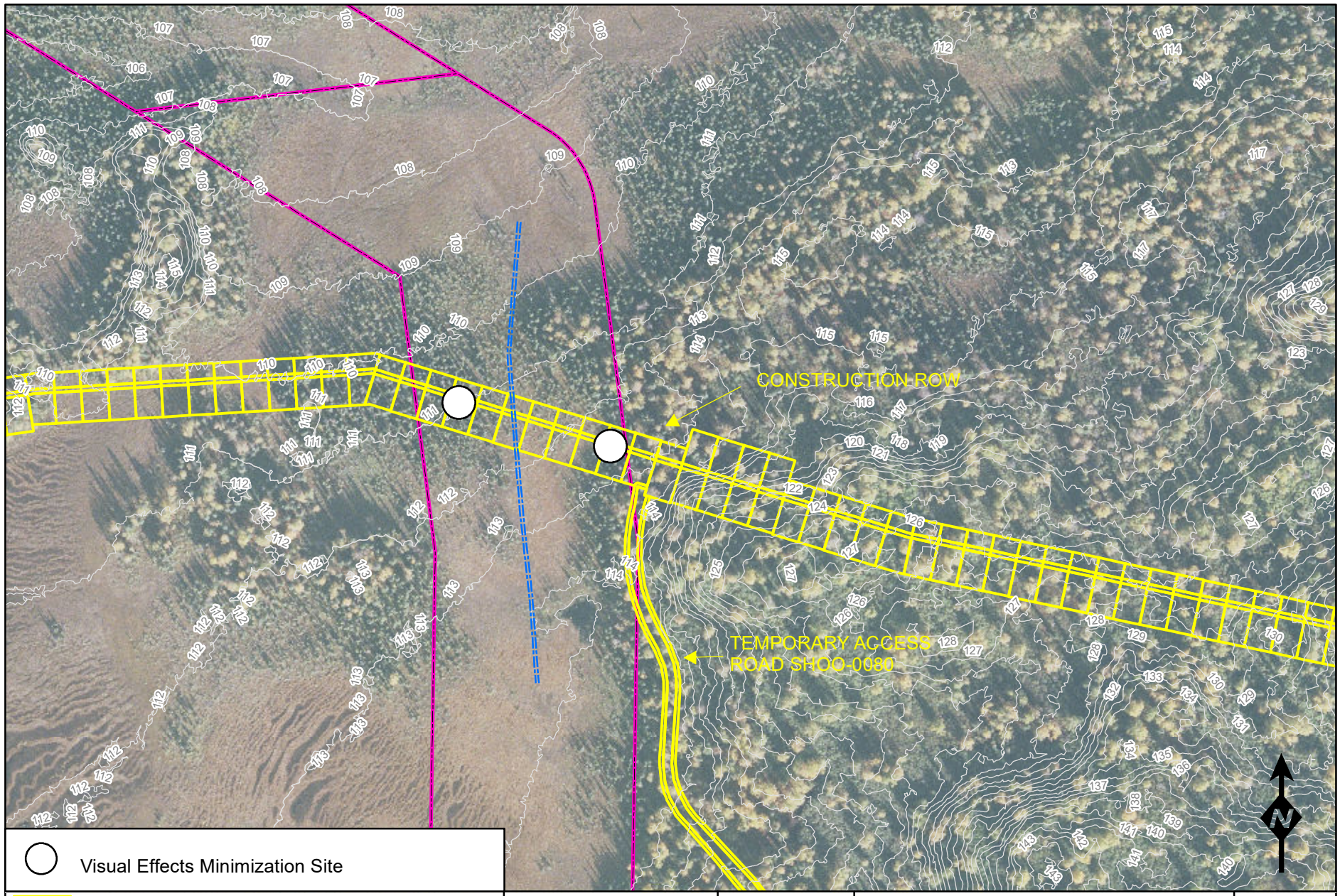
INHT XSING #1

DONLIN GOLD PROJECT

FIGURE:

2

DG: INHT XING 1.mxd, 09/27/17, R00



Visual Effects Minimization Site

Proposed Natural Gas Pipeline Construction Footprint

INHT, Public Access Easement (400' Wide)

Approximate INHT Location

Contour internval = 1m

SCALE:

0 50 100 200 Feet

0 12.5 25 50 Meters

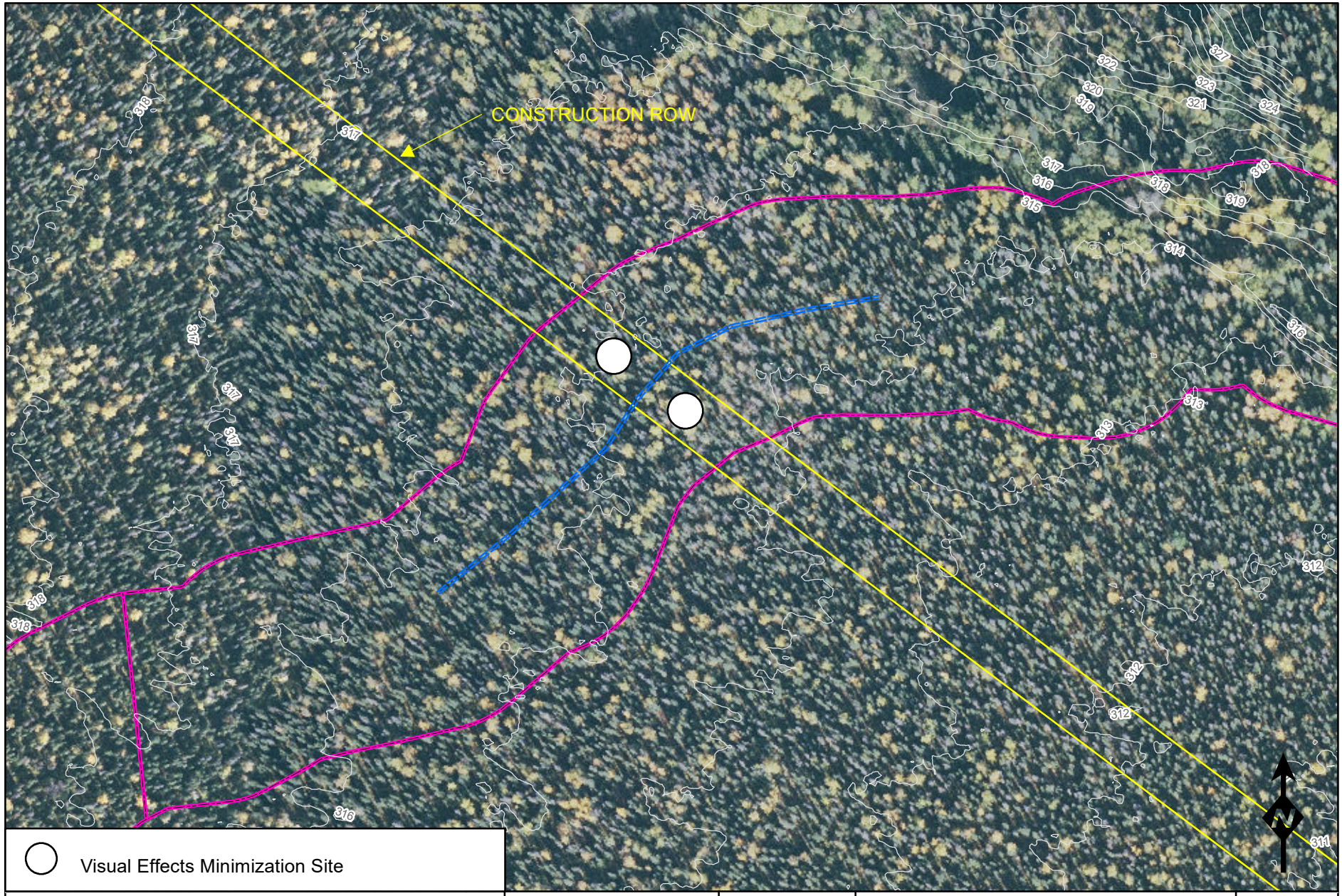
DONLIN GOLD

INHT XSING #2

DONLIN GOLD PROJECT

FIGURE: 3

DG: INHT XING 2.mxd, 09/27/17, R00



Visual Effects Minimization Site

Proposed Natural Gas Pipeline Construction Footprint

INHT, Public Access Easement (400' Wide)

Approximate INHT Location

SCALE:

0 50 100 200 Feet

0 12.5 25 50 Meters

Contour internval = 1m

DONLIN GOLD

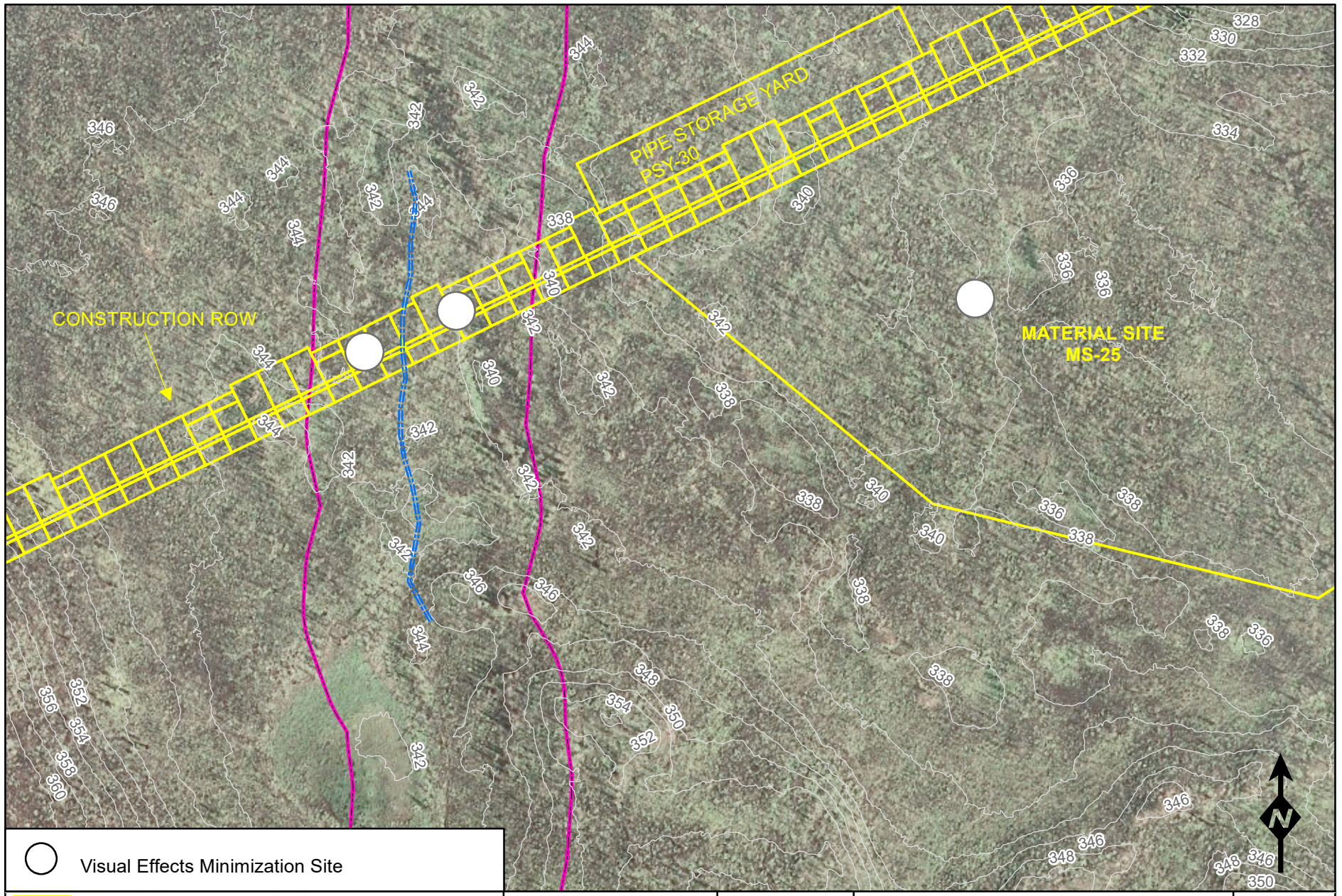
INHT XSING #3

DONLIN GOLD PROJECT

FIGURE:

4

DG: INHT XING 3.mxd, 09/27/17, R00



Visual Effects Minimization Site

Proposed Natural Gas Pipeline Construction Footprint

INHT, Public Access Easement (400' Wide)

Approximate INHT Location

Contour internval = 2 m

SCALE:

0 50 100 200 Feet

0 12.5 25 50 Meters

DONLIN GOLD

INHT XSING #4

DONLIN GOLD PROJECT

FIGURE:

5

DG: INHT XING 4.mxd, 09/27/17, R00

Construction Methods

The following discussion presents proposed methods to minimize adverse visual effects to the INHT during construction of the pipeline.

Narrowing and/or Feathering the Pipeline Construction ROW

Adverse visual effects to the INHT and pipeline ROW intersections may be minimized by narrowing the width of the construction ROW for a short distance on one or both sides of the trail. In addition, variation in the edges of the vegetation clearing (feathering) may be introduced to minimize visual adverse effects. Both techniques, either jointly or separately, narrow the observer's horizontal field of view, and provide a more natural look at the vegetation clearing limits (Figure 6).

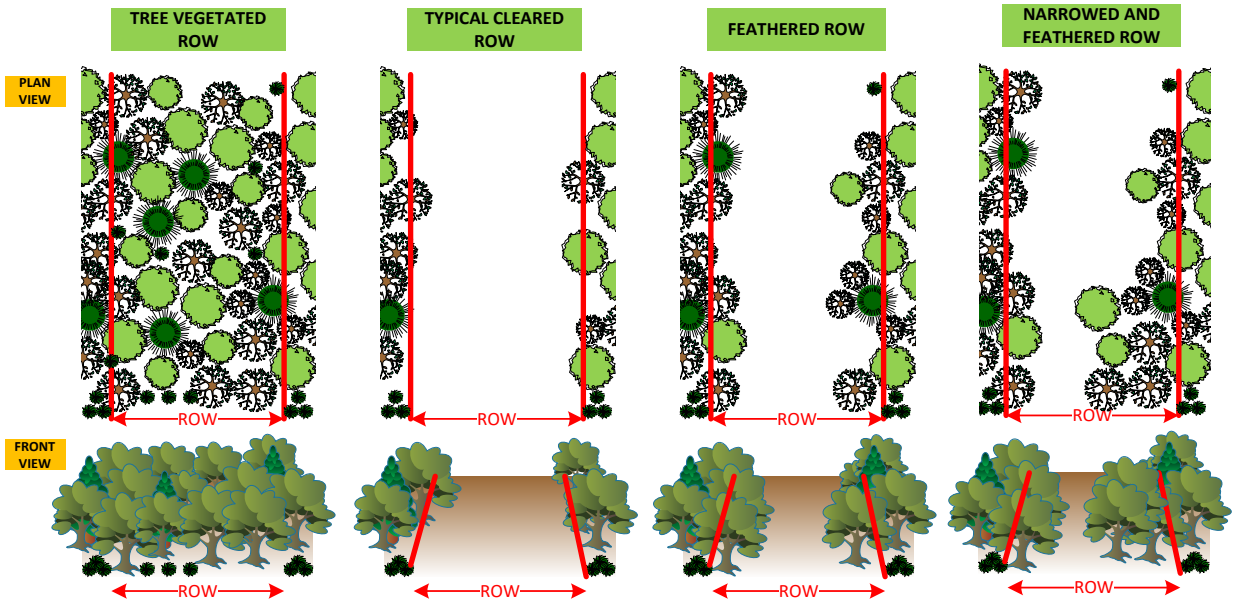


Figure 6 – Narrowing and feathering the construction ROW reduces the observer's horizontal field of view, and provide a more natural look at the vegetation clearing limits.

Visual Barriers

Adverse visual effects to the INHT can be minimized by limiting the field of view of the observer by placing barriers perpendicular to the INHT ROW and within proximity to the INHT (Figure 7). Barriers would be built using native vegetation, brush piles, earthen berms, or a combination. In addition, barriers can help define the location of the INHT and avoid potential confusion of travelers along the trail. The barriers are described below.

Vegetation barriers – Locally sourced tall vegetation (nominally 5 ft in height) can be planted on the sides of the INHT to speed up natural vegetation recovery and reduce visual effects.

Brush piles – Downed trees or brush piles, can be placed on the sides of the INHT to define the INHT and reduce visibility of the pipeline ROW.

Berms – Where hydrological conditions allow it, earthen berms constructed with locally sourced material, and revegetated to provide a visual obstruction of the ROW to the observer.

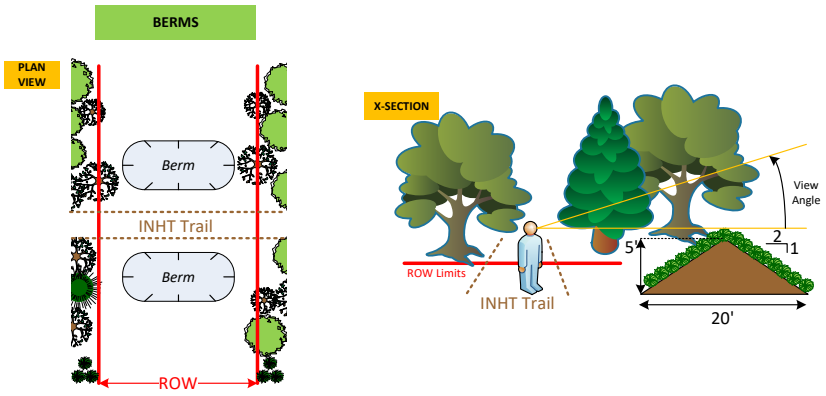


Figure 7 – Berms constructed with locally sourced material, and revegetated, provide a visual obstruction of the ROW to the observer, by limiting the vertical field of view.

Placement of Line Markers, Main Line Valves, and Cathodic Protection Devices

Line markers, MLVs, and cathodic protection devices are required pipeline safety components. These features and possible methods for their placement to minimize visual effects to trail users are described below.

Line Markers

Line markers (Figure 8) must be placed and maintained as close as practical over the buried pipeline at each crossing of a public road and railroad; and whenever necessary to identify the location of the pipeline to reduce the possibility of damage or interface (49 CFR 192.707). Typical line markers include: carsonite-type posts labeled "Warning Buried Pipeline"; and aerial mile markers mounted on metal posts and visible from the air. The aerial mile markers have the highest potential to be visible from the trail. However, the visual effects of the aerial mile markers may be minimized because of the forested vegetation along most of the INHT through the Rainy Pass area. The amount of forested vegetation is reduced as the INHT and pipeline approach the Threemile River, but at this point the distance between the trail and the proposed pipeline corridor is approximately 1 mile. Where practicable, aerial mile markers in the proximity of the Threemile River may be placed at sites where the terrain or vegetation hide the marker from the trail, while remaining visible from the air.

Figure 8 – Typical line markers: Aerial mile markers (left) and "Warning Buried Pipeline" marker (right).

Mainline Block Valves

Approximately 20 mainline block valves (MLVs) would be installed at intervals of no more than 20 miles. All of these valves would be manually operated. The valves would be fitted with locks and a signpost similar to the line markers, showing the MLV number. Reflective tape would be positioned on the signpost and there may be other visual aids with reflective tape to alert travelers along the ROW of the presence of the valve stations. The 25 ft by 25 ft (7.6 m by 7.6 m) MLV sites would be fenced and would have sliding gates with locks. The only currently known locations for MLVs would be: the Beluga Pipeline (BPL) tie-in at MP 0 of the pipeline, compressor station, and the Farewell pig launcher/receiver site. All other MLV locations will be determined during detailed design. As most practicable, MLV locations between the Skwentna and Threemile Rivers will be sited at locations visually hidden from the INHT. If this is impracticable, visual barriers such as vegetation may be used to obstruct the view.

Cathodic Protection Test Stations

Cathodic protection test stations would be installed at accessible locations, and at intervals of one mile or less, to measure pipe-to-soil potential for the establishment and maintenance of an effective cathodic protection system. Accessibility would be based on the expected cathodic protection survey season. Test stations would be installed where the pipeline parallels, crosses, or passes near other cathodically protected pipelines or structures. The specific location of test stations would be determined during final design. Where practicable and necessary to minimize visual effects, cathodic protection devices can be installed near line markers.

Communication and Coordination

Donlin Gold will communicate and coordinate with INHT trail users about pipeline construction plans and progress to enable free and safe passage at INHT/construction ROW crossings. Through its Public Outreach Plan, Donlin Gold would provide information regarding pipeline construction and maintenance activities. Pipeline construction work that has the potential to affect the free and safe passage of annually organized INHT events such as the Iditarod Sled Dog Race, Iron Dog, or Iditasport will be scheduled and coordinated in consultation with each interested party. This can minimize or eliminate conflicts of construction activities with trail users and especially the trail events hosted by these groups.

OTHER PLANS TO MINIMIZE ADVERSE EFFECTS

Pre-Construction Surveys of INHT Crossings 1, 2, 3, and 4

The INHT crossing locations will be surveyed and photographs will be taken to document the trail conditions and viewshed before construction.

A preliminary site assessment will be completed prior to construction at each INHT crossing to identify construction methods, or options to narrow and/or feather the construction ROW (see Figure 6).

After construction, each crossing will be assessed for the need to install visual barriers. If necessary, visual barriers will be installed perpendicular to the ROW based on site-specific conditions at the time.

Evaluation of Need and Location of Material Site 25

During detailed construction planning, the need to develop Material Site 25 (MS-25) will be re-evaluated. MS-25 may not be required and thus, not developed. If required, Donlin Gold will investigate means to minimize adverse effects by reducing the area of disturbance of the material site. If developed, MS-25 will be reclaimed by re-contouring the area to blend with the surrounding environment and methods would meet State of Alaska reclamation requirements. Visual barriers may also be installed, depending on the final configuration of the development at MS-25.