
Red Dog Mine
Cultural Resource Protection Plan – Version 2
Alaska Heritage Resource Survey Sites DEL-163 and DEL -337
November 3, 2009

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1 Introduction

Teck Alaska Incorporated (Teck) operates the Red Dog Mine in the Northwest Arctic Borough on land owned by the NANA regional Corporation. The operation currently extracts zinc and lead bearing ores from the Main Pit. At current projection rates the recoverable ore in the Main Pit will be exhausted in 2012. To extend the operational life of the project to 2031 Teck is proposing to develop the Aqqaluk Deposit. The Aqqaluk Deposit is located adjacent to the Main Pit. The ore will be processed and shipped to markets using the existing facilities. Development of the Aqqaluk Pit will impact less than 245 acres, portions of which have already been disturbed by exploration activities. Overburden and waste rock excavated from the deposit will be placed in the exhausted Main pit or in the existing Waste Rock Storage pile.

The extension of the operation of the Red Dog Mine into the Aqqaluk Deposit has the potential to affect two cultural resource sites that have been recommended to be eligible for listing on the National Register of Historic Places. Regulations implementing the Historic Preservation Act, identify four criteria for including a site in the National Register. "The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. that are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. that are associated with the lives of persons significant in our past; or
- C. that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. that have yielded, or may be likely to yield, information important in prehistory or history."

The sites were recommended as eligible by qualified archeologist working for Northern Land Use Research Inc. (NLUR) based on item D above. NLUR and other cultural resource consultants have conducted a number of archeological surveys at the site at the request of Teck and NANA. The sites in question, were submitted to the Alaska State Historic Preservation Office and have been given the Alaska Heritage Resource Survey (AHRS) site numbers of DEL-163 and DEL-337. The purpose of this report is to assesses the potential for the operation to impact the sites through mining activity, exploration activity, or the recreational activities conducted by site personnel during their off work hours. The following discussion includes a general description of mining, exploration, and recreational activities that could potentially affect the cultural sites; descriptions of the sites themselves and specific potential disturbance threat, and the operational controls that would be put in place to address each threat.

Mining Activity

Mining activities focus on removing the ore from the ground, moving it to the mill for processing, and disposing of waste materials. The initial ground-disturbing activities include the construction of access roads followed by the installation of surface water diversions that direct water away from the areas to be disturbed. Disturbance areas would be stripped of topsoil which would be stored in existing stockpiles. The pit would be developed by conventional drilling and blasting techniques. The blasted material would be removed by front end loaders, shovels, and haul trucks with waste material hauled for backfilling the mined-out Main Pit and ore being hauled to the crusher. The principal threats from mining activities include the use of heavy equipment and blasting, which could result in blasted materials landing on or within a sensitive site. Sites could also potentially be affected by foot traffic.

Exploration Activity

Exploration activity generally involves the construction of access roads and drill pads followed by drilling activities. Effects could result from physical disturbance of the sites by heavy equipment or from foot traffic associated with workers supporting these activities.

Recreational Activity

Recreational activity is limited to employees who may make use of the area in their free time after work. The potential affect from these activities would be employees hiking into a sensitive area and causing a disturbance or removing artifacts.

2 AHRS DEL-163

2.1 Site Description

The site is a lithic site, 80 x 130 m in size located on a knoll near Red Dog Creek. The knoll provides an excellent view of the surrounding area. The site was originally found by Hall and Associates in 1982. NLUR resurveyed the site in 1997 using the systematic pedestrian survey method. The 1997 survey determined the site to be larger and more significant than indicated by the 1982 survey. The 1997 survey found numerous formal tools including microblades and microblade fragments, retouched flakes, bifaces and a black chert fluted point and associated channel flake. The presence of a fluted point suggests occupation dating to the late Pleistocene or early Holocene. The NLUR report recommends the site as eligible for the National Register of Historic Places. The site is on land owned by the NANA Regional Corporation.

Survey Reports

Bowers, P. M., A. S. Higgs, and S. C. Gerlach. 1997. Archaeological Survey in the Vicinity of Red Dog Mine, Northwest Alaska. Report prepared for Cominco Alaska, Inc., Northern Land Use Research, Inc., Fairbanks, Alaska.

Hall, E. S., Jr. 1983. A Cultural Resource Site Reconnaissance Performed in Conjunction with Development of the Red Dog Mine, Northwestern Alaska. Technical Memorandum #1. Appendix by S. Craig Gerlach. Edwin Hall and Associates, Brockport, New York.

2.2 Potential Disturbance Threats

Mining Activity

The site is located over 3,500 feet away from planned surface disturbance related to the Main Pit, the planned Aqqaluk Pit, and over 2,000 feet away from existing and planned support facilities. There would be no reason for mine-related equipment or personnel to be in the vicinity of this site. The site is located outside of the 1,500 foot blast safety area and is far enough away from the proposed Aqqaluk Pit that it would be unlikely that blasted material would reach the site. Therefore, the potential for disturbance of the site from mining activity is low.

Exploration Activity

The site is not in an area currently undergoing exploration. However, there is ongoing natural gas exploration drilling and mineral exploration drilling in the general proximity of the site (within ¼ mile). If uncontrolled there is a moderate risk for the site to be disturbed by exploration activity

either in the form of vehicular traffic, road or drill pad construction, or foot traffic. Implementing the operational controls detailed below, the potential for disturbance of the site from exploration activity is low.

Recreational Activity

The site area is easily assessable by hiking a short distance from existing site roads. The knoll provides a commanding view of the pits and mill site, and natural gas exploration project. Thus the area is a potentially attractive hiking destination. If uncontrolled there is a moderate risk for the site to be disturbed by recreational activities. With the operational controls detailed below, the potential for disturbance of the site from recreational activity is low.

2.3 Operational Controls

The area around the site is designated as a limited entry area requiring the approval of the Environmental Department prior to entry and with trespassers subject to disciplinary action. Attachment II depicts the extent of the restricted entry area. All planned activities in the area would be reviewed by an Environmental Coordinator. For reviews involving cultural resources the procedures outlined in the attached Cultural Resources Management SOP would be followed. If a proposed activity that has the potential to impact the site is identified, the impact would be avoided by developing an alternative location or activity. If disturbance of the site was unavoidable, it would be mitigated prior to disturbance. Mitigation is discussed in Section 4 and is consistent with in Section 2.7 of the SOP.

Specifically, potential disturbance to the site from mining, exploration or recreational activities would be minimized as follows.

Mining Activity

Mining activities associated with the Aqqaluk Pit would occur at least ½ mile from the site. There are currently no planned mining activities that could result in the physical disturbance at the site. The site is far enough from the proposed pit that the effects from normal blasting would not reach the site. Therefore, the potential for mining activity to affect the site is considered low.

Exploration Activity

Active exploration is being conducted outside the immediate vicinity of the site but close enough to warrant consideration. Prior to any exploration activity within the restricted area an Environmental Coordinator would review the project to ensure the site is avoided. Since exploration activities, including the placement of access roads and drill pads, would need to be planned it is unlikely that exploration activities could not be designed to avoid the site. In the event that the site could not be avoided, a mitigation plan would be developed as outlined below. Overall, the potential for exploration activities to affect the site is considered low.

Recreational Activity

Non-work related access to the area around the site is prohibited. Therefore, recreational activities are considered to have a very low potential to affect the site.

3 AHRS DEL-337

3.1 Site Description

The site is a small chert quarry site located at a bedrock knob near the Aqqaluk Deposit with good views to the north. NLUR performed a surface inspection of the site in 1997. The surface of the northern flank of the knob is covered with grey chert nodules and several clusters of lithic scatter were located at the top of the knob. The vegetation mat contained an estimated 500 flakes and several bifacially worked flakes were found in a cluster. The survey report recommends the site as eligible for the National Register of Historic Places. The site is located on land owned by the NANA Regional Corporation.

Survey Report

Gerlach, S. C., A. S. Higgs, and O. K. Mason. 1997. Survey and Evaluation of Archaeological Sites in the Aqqaluk Deposit and Areas Adjacent to Red Dog Mine, Alaska. Report prepared for Cominco Alaska, Inc., Northern Land Use Research, Inc., Fairbanks, Alaska.

3.2 Potential Disturbance Threats

Mining Activity

The site is located near the proposed Aqqaluk Pit. If uncontrolled, there is a high risk for the site to be disturbed by ground disturbing mining activity, including stripping of cover material and construction of diversion structures. Due to the proximity of the site to the proposed Aqqaluk Pit, fly rock from blasting activity within the pit has the potential to land at the site. With the operational controls detailed below, the potential for disturbance of the site from mining activity is low.

Exploration Activity

The area in direct proximity to the site is an active mineral exploration area. If uncontrolled there is a moderate risk for the site to be disturbed by exploration activity, including access road and drill pad construction. Implementing the operational controls detailed below, the potential for disturbance of the site from exploration activity is low.

Recreational Activity

With the development of the Aqqaluk Pit the site will be easily assessable by hiking a short distance from future roads. The area has the potential to become a common starting point for recreational hiking. If uncontrolled there is a moderate risk for the site to be disturbed by recreational activities. With the operational controls detailed below, the potential for disturbance of the site from recreational activity is low.

3.3 Operational Controls

The area around the site is designated as a limited entry area requiring the approval of the Environmental Department prior to entry. Attachment II depicts the extent of the restricted entry area. All planned activities in the restricted entry area would be reviewed by an Environmental Coordinator. For reviews involving cultural resources the procedures outlined in the attached Cultural Resources Management SOP would be followed. If a potential impact was identified the proposed activity would be revised to avoid disturbance of the site. In the unlikely event that the activity could not be relocated, mitigation would be implemented as outlined in Section 4 below and Section 2.7 of the SOP prior to disturbance.

Potential disturbance to the site from mining, exploration or recreational activities will be minimized as follows.

Mining Activity

The site is located outside the pit disturbance area described in the Draft Red Dog Mine Extension – Aqqaq Project SEIS. In the unlikely event ground disturbance associated with mining activity is proposed for the area near the site the proposed project will undergo a standard internal environmental review. Any ground disturbing activity in the general area of the site would be reviewed and modifications to the activity made as necessary to avoid the site. If disturbance was unavoidable, the site would be mitigated.

To minimize the potential for fly rock to land on the site best blasting practices will be employed to limit the amount of fly rock generated by the activity. Over the 20 years of mining operations, Teck has a well-developed blasting program that can be conducted without posing a threat to cultural resources.

Exploration Activity

The area adjacent to the site is an active exploration area. Prior to any exploration activity within the restricted area an Environmental Coordinator will review the project to ensure the site is avoided. In the unlikely event the exploration plan cannot be modified to avoid the site, mitigation would be implemented.

Recreational Activity

Non-work related access to the area around the site is prohibited. Therefore, recreational activity would not pose a threat to the site.

4 Mitigation

With the exception of avoidance, data recovery is the most common, cost effective, and practical form of mitigation to be considered for prehistoric cultural resource sites in Alaska. For sites of the types typically found in the Red Dog area, data recovery includes archaeological excavations, which results in salvage of artifacts and information which relates the artifacts in time and space. It is important to note that this process is itself a destructive one, which destroys a site in the process of mitigation. Data recovery is not just the removal of materials from the ground; by definition it includes laboratory analysis, cataloging, and professional reporting of all recovered material and spatial information. When a scientifically significant portion of a site (percentage to be determined by the SHPO and agreed to in an MOA) has been excavated, the site may be considered mitigated ("cleared" in the commonly used jargon) for development purposes.

In some cases stabilization and preservation could be applied as a mitigation strategy. This approach, as with any mitigation technique, must have SHPO and/or ACHP approval. A wide range of techniques might be available to preserve or stabilize a site threatened by erosion, construction, and/or vandalism. Such techniques might include the following: gravel or earth burial, GEOWEB stabilization, placement of rock berms, sandbags, filter cloth, bulkheads, gabions, stream training, fencing, and signing.

5 Site Disturbance Monitoring

Due to the sites' proximity to proposed exploration and mining activity the Alaska State Historic Preservation Office (SHPO) recommends that DEL-163 and DEL-337 be inspected annually by a qualified Archeologist for signs of disturbance.

To meet this recommendation DEL-163 and DEL-337 will be monitored annually for signs of disturbance by a qualified Archeologist. An annual monitoring report will be generated based on the field inspection. Copies of the annual monitoring report will be provided to Teck, NANA and SHPO. The first annual monitoring of the sites will be scheduled for the 2010 field season.

The highest potential for disturbance of the sites is during the initial pit development stage. After this period the potential for site disturbance significantly decreases. In three to five years the development of the Aqqaluk pit is expected to be at a stage that will physically limit potential site disturbance. At that time Teck will meet with NANA and SHPO to determine if a change in the frequency of monitoring is warranted.

The purpose of the meeting will be to;

- review the annual monitoring reports,
- review planned and potential activity near the sites,
- determine if a change to the monitoring frequency is warranted, and
- determine the timing of next review meeting.

Teck will not change the frequency of site monitoring without the concurrence of NANA and SHPO.

Attachment I
Red Dog Mine – Cultural Resources Management SOP

Cultural Resources Management SOP

1 Purpose and Scope

The purpose of this SOP is to define the procedure for dealing with known and unknown cultural resource sites in the vicinity of the Red Dog Operations. The operational areas are divided into five units; Mine, Port, DMTS Road outside of Cape Krusenstern, within Cape Krusenstern, and Other.

This SOP provides a general guideline for the Environmental Department to follow in the review of project for potential impact to cultural sites. Detailed guidelines for agency consultation, notification requirements, and site clearance requirements are provided in the [Integrated Plan for the Management of Cultural Resources in the Red Dog Project Area \(Northern Land Use Research, Revised August 2006\)](#).

2 Procedure

2.1 Training

2.1.1 Employee Training

All employees are required to take an annual environmental awareness class specific to Red Dog Operations. The Cultural Resource portion of the training covers the following areas:

- Ownership of the sites
- Penalties for looting of a site
- If artifacts are found in their work area
 - All work in the area is stopped
 - No further disturbance to the site, including movement of equipment off the site.
 - Contact the Environmental Department

If the employee is to perform work in an area with a known cultural resource or undisturbed area with a high potential of cultural resource sites additional training is provided as needed.

2.1.2 Contractor Training

All Contractor personnel are required to take an environmental awareness class specific to Red Dog Operation. The Cultural Resource portion of the training covers the following areas:

- Ownership of the sites
- Penalties for looting of a site
- If artifacts are found in their work area
 - All work in the area is stopped
 - No further disturbance to the site, including movement of equipment off the site.
 - Contact the Environmental Department

If the contractor is to perform work in an area with a known cultural resource or undisturbed area with a high potential of cultural resource sites additional training is provided to the contractors as needed.

2.2 Operational Areas

Operational areas are divided into two general categories; disturbed and undisturbed areas.

Disturbed areas have undergone a cultural resource survey and known sites were mitigated prior to disturbance. There is a low probability of encountering a site within a disturbed area. If a cultural resource site is discovered all work in the vicinity is to stop and the procedure outlined in Section 2.3 will be followed.

Undisturbed areas may not have undergone a cultural resource survey. Prior to disturbance a description of the area to be disturbed will be submitted by the Project Planner to the Environmental Department. The Environmental Department will review the area as outlined in Section 2.4. If the status of the area has not been determined, a cultural resource survey as outlined in Section 2.5 will be conducted.

2.2.1 Mine

The Mine area is defined as the area within the facility boundary. This includes both disturbed and undisturbed areas. Disturbed areas include roads, pads, pits, tailings pond, dumps, and other types of land disturbance. The undisturbed area is land within the facility boundary that has not been disturbed. Land disturbing activities within the Mine area are to follow the procedure outlined in Section 2.2

2.2.2 Port

The Port area is defined as the area within the facility boundary. This includes both disturbed and undisturbed areas. Disturbed areas include roads, pads, buildings, and other types of disturbance. The undisturbed area is land within the facility boundary that has not been disturbed. Land disturbing activities within the Port area are to follow the procedure outlined in Section 2.2

2.2.3 DMTS Road outside of Cape Krusenstern

The DMTS Road outside of Cape Krusenstern is defined as the Right-of-Way (ROW) for the Delong Mountain Transportation System road (Port Road) from the Mine facility operating boundary to the Port facility operating boundary excluding the portion of the ROW that passes through the Cape Krusenstern National Monument. Disturbance activities in this area include maintenance of existing roads and material extraction. Disturbed areas include existing roads and material sites. The undisturbed area is land within the ROW that has not been disturbed. Land disturbing activities within this area are to follow the procedure outlined in Section 2.2

2.2.4 Cape Krusenstern National Monument

The Cape Krusenstern area is divided into two sections. The first is the Port Road ROW through the monument and the other is the rest of the monument.

2.2.4.1 DMTS Port Road and Material Site ROW

This area is defined as the portion of the DMTS ROW that passes through Cape Krusenstern. Disturbance activities in this area include maintenance of existing roads and material sites. Disturbed areas include existing roads and material sites. The undisturbed area is land within the ROW that has not been disturbed. Land disturbing activities within this area are to follow the procedure outlined in Section 2.2

2.2.4.2 Rest of Monument

There is a higher probability of encountering an unknown cultural resource site away from the road ROW. Red Dog operational activity away from the ROW is minimal. Activities include environmental sampling and winter search and rescue.

2.2.4.2.1 Environmental Sampling

Sampling activities are conducted throughout the year. During the open water season, sampling is conducted by helicopter. By verbal agreement with representatives of the National Park Service the helicopter lands near the sample location. Landing zones are marked at established sampling sites and are used unless there is a safety concern. Prior to landing the landing zone is visually checked for hazards and signs of a cultural resource site. If evidence of a site is observed a different landing zone is chosen and the location of the site is reported as outlined in Section 2.8.

During the winter sampling activities, travel to sample location is by snow machine. Due to snow cover, it is unlikely that a cultural resource site would be disturbed during winter travel. If a site is located and impacted by a piece of equipment the procedure outlined in Section 2.3 is to be followed. The site will be reported as outlined in Section 2.8.

2.2.4.2.2 Winter Search and Rescue

From time to time Red Dog assists the local search and rescue groups. Within the monument the searches are usually centered along known winter trails. Due to snow cover there is a low probability of encountering a cultural resource site during winter search and rescue activities. If a site is located and impacted by a piece of equipment the procedure outlined in Section 2.3 is to be followed. The site will be reported as outlined in Section 2.8.

2.2.5 Other

Other areas encompass all other areas that maybe visited by Red Dog personnel or contractors. Areas include environmental monitoring sites and drill sites. Access to these sites is by helicopter, overland vehicle travel in winter and summer, or overland foot travel.

2.2.5.1 Winter Travel

Activities during winter include snow machine travel to environmental monitoring stations, search and rescue operations by snow machine, and overland travel associated with winter exploration drill programs. Due to snow cover there is a low probability of encountering a cultural resource site. If a site is located and impacted by a piece of equipment the procedure outlined in Section 2.3 is to be followed. The site will be reported as outlined in Section 2.8.

2.2.5.2 Open Water Season

Activities during the open water season include helicopter travel to environmental monitoring stations, helicopter travel to drill sites, overland travel by foot and vehicle to environmental monitoring sites.

Helicopter landing zones have the potential of containing a cultural resource site. Landing zones are marked at established sampling sites and are used unless there is a safety concern. Prior to landing the landing zone is visually checked for hazardous and signs of a cultural resource site. If evidence of a site is observed a different landing zone is chosen and the location of the site is reported as outlined in Section 2.8.

Overland travel by foot and vehicle has the potential to encounter a cultural resource site. If a site is located and impacted by a piece of equipment the procedure outlined in Section 2.3 is to be followed. The site will be reported as outlined in Section 2.8.

2.3 Encountering Unknown Cultural Resource Site

This section outlines actions to be taken when previously unknown cultural resource sites or human remains are discovered.

When unknown cultural resource sites or human remains are discovered in the general work area of the Mine, Port or DMTS Road the following actions are to be taken;

- All work in the area is to stop immediately.
 - Equipment is not to be moved until the extent of the site is determined by the Environmental Department.
- The Supervisor will establish a minimum 20 meter no entry buffer around the site.
- The Supervisor will notify the Environmental Department.
- The Environmental Department will notify the proper agencies as outlined in Section 2.8.
- The Environmental Department will survey the site and consult with the proper agencies to determine the proper method to remove the equipment from the site with minimal disturbance.

When unknown cultural resource sites or human remains are discovered in an area away from the general work area and is impacted by a piece of equipment, the operator will visually survey the area to determine the exit route that will minimize impacts to the site. The area will be marked and a 30 meter travel buffer around the site will be established. The equipment will be carefully removed from the site if the use of the equipment is required for the return trip to the Mine, Port or DMTS Road. An Operator's visual survey of an area prior to the removal of the equipment impacting a cultural site is limited to those areas described in Sections 2.2.4.2 and 2.2.5. In all other areas the equipment is not to be moved until the Environmental Department has received the approval from the proper agencies. The Supervisor will notify the Environmental Department as soon as possible. The Environmental Department will notify the proper agencies as outlined in Section 2.8.

2.4 Reviewing an Area for Cultural resource sites

Prior to disturbing an undisturbed area the Environmental Department will conduct the following review in consultation with the State Historic Preservation Office (SHPO), to determine the need for a cultural resources survey *Note: Due to the confidential nature of cultural resource sites, access to the documents and databases with information related to the location and description of the sites is restricted to the Environmental Department.*

- An Environmental Coordinator will review the Archaeological ArcGIS database and any relevant cultural resource reports on the proposed project area.
 - For project areas that have not had a systematic¹ cultural resource survey, a survey will be conducted by a qualified archeologist as outlined in Section 2.5.
 - If the project area has been systematically surveyed and no cultural resource sites have been identified in the project area, it is unlikely that an additional cultural resource survey will be necessary.

¹ As defined in the Integrated Plan for the Management of Cultural Resources in the Red Dog Project Area (Northern Land Use Research, Revised August 2006), pp. 37-38.

- If the project area will affect a known cultural resource site, the site will be mitigated as outlined in Section 2.7 in consultation with SHPO and the land owner,.

2.5 Conducting a Cultural Resource Survey of an Area

When an area has been identified as requiring a cultural resource survey, the survey will be conducted as outlined in Chapter 7 of the [Integrated Plan for the Management of Cultural Resources in the Red Dog Project Area \(Northern Land Use Research, Revised August 2006\)](#).

The survey will include background research on the area and either a reconnaissance survey or an intensive survey. All surveys will be conducted by a qualified archeologist. If cultural remains are encountered during the archaeological survey, then the report should evaluate the eligibility of the find for inclusion to the National Register of Historic Places, assess the nature of project effects on the historic properties and offer recommendations of appropriate mitigation measures as outlined in Section 2.7. A copy of the survey report will be forwarded to SHPO by the Environmental Department for their review and concurrence with the findings. For lands covered by the NANA/NPS Agreement, plan, review and surveys will be conducted as described in the Agreement.

2.6 Protection of Known Cultural resource sites

Known Cultural resource sites are protected in the following ways:

- Access to the databases and reports with the location of known sites is limited to personnel who conduct the cultural resource site reviews outlined in Section 2.4.
- The majority of known sites are protected due to the distant location of the site relative to the road network of the Red Dog Operations.
- Sites reasonably accessible from the road system are protected using one of the following methods. The level of protection is based on the importance of the site and the likelihood of casual visitation of the site.
 - Fencing of the site feature to prevent disturbance of the feature.
 - Designate the general area around the site as a no entry zone.
 - Designate the general area around the site as a limited entry area requiring approval by the Environmental Department prior to entry.
 - No physical protection.
- Areas identified as limited entry or no entry will be added to the relevant restricted area maps. The areas are identified as requiring Environmental Department approval prior to entry. The maps are updated as access restrictions change and are made available to all site personnel.

The need and level of site protection will be determined during project planning and permitting stages in consultation with the relevant permitting agency, SHPO, land owner, and Teck.

2.7 Mitigation of Cultural resource sites

The level of mitigation is dependent on the significance of the site as determined by the cultural resource survey as outlined in Section 2.5, the level of potential disturbance as determined by the project design, and the mitigation required by SHPO and the landowner.

- The design of the project will be evaluated to determine if the cultural resource site could be avoided and the site protected as outlined in Section 2.6.
- If a site cannot be avoided the land owner and the SHPO will consult to determine if a site excavation or other mitigation will be required prior to disturbance of the site.

- If required, a site excavation will be conducted as described in Chapter 7 of the Integrated Plan for the Management of Cultural Resources in the Red Dog Project Area.
- The final deposition of the artifacts will be determined by the land owner.

2.8 Reporting newly discovered Cultural resource sites

In the event previously unreported cultural or human remains are discovered, the procedures outlined in Appendix A of the [Integrated Plan for the Management of Cultural Resources in the Red Dog Project Area](#) will be followed. The Environmental Department will contact the landowner and SHPO and provide the following information.

- Location of Site
- Brief description of Site
- Measures taken to protect the Site

In the event that human remains are discovered, the Environmental Department in conjunction with the Loss Control Department, will also notify the Alaska State Troopers.

For NANA owned lands covered by the NANA/NPS Agreement, notification will be made to both NANA and NPS.

The Environmental Department will consult with SHPO regarding eligibility of the find for inclusion to the National Register of Historic Places and the appropriate actions to be taken to avoid, minimize, or mitigate adverse effects to eligible sites.

3 Key Responsibilities

Project Planner	Responsible for providing plans of proposed disturbance areas to the Environmental Department for Cultural Resource review.
Supervisors	Responsible for reporting the discovery of unknown cultural resource sites to the Environmental Department. Ensure all disturbance activity is stopped upon the discovery of an unknown cultural resource site as outlined in Section 2.3.
Environmental Coordinator	Responsible for reporting unknown cultural resource sites to the proper agencies and land owner. Responsible for ensuring culturally restricted areas are added to the appropriate restricted access maps. Conduct the preliminary review of disturbance project as outlined in Section 2.4. Coordinate any further cultural resource survey or mitigation that maybe required.

4 Departure from Procedure

This SOP was written to comply with applicable laws and regulations pertaining to the protection of cultural resources. Failure to follow this procedure could result in the destruction of possible historic sites. Departure from procedures resulting in destruction of an historic site may also lead to criminal or civil penalties for you and the Company as well as adverse affects on corporate performance and reputation.

5 Definitions

Cultural Resource Site – A site that may contain artifacts related to historic human activity. In the Red Dog area this may include camp sites, quarries, lithic scatters (rock chips left over from stone blade and arrow head manufacture), graves, hunting blinds, and other types of sites with human activity.

6 General Requirements

- National Historic Preservation Act (16 U.S.C §470)
- Alaska Historic Preservation Act (Title 41, Chapter 35)
- ISO 14001 – 4.4.6 Operational Control
- Teck Cominco EHS Standards – Standard 11 Operational Control and Change Management.
- NANA/NPS Agreement
- NANA/TCAK Agreement

7 Key Documents/Tools/References

Access to the following documents is restricted to the Environmental Department.

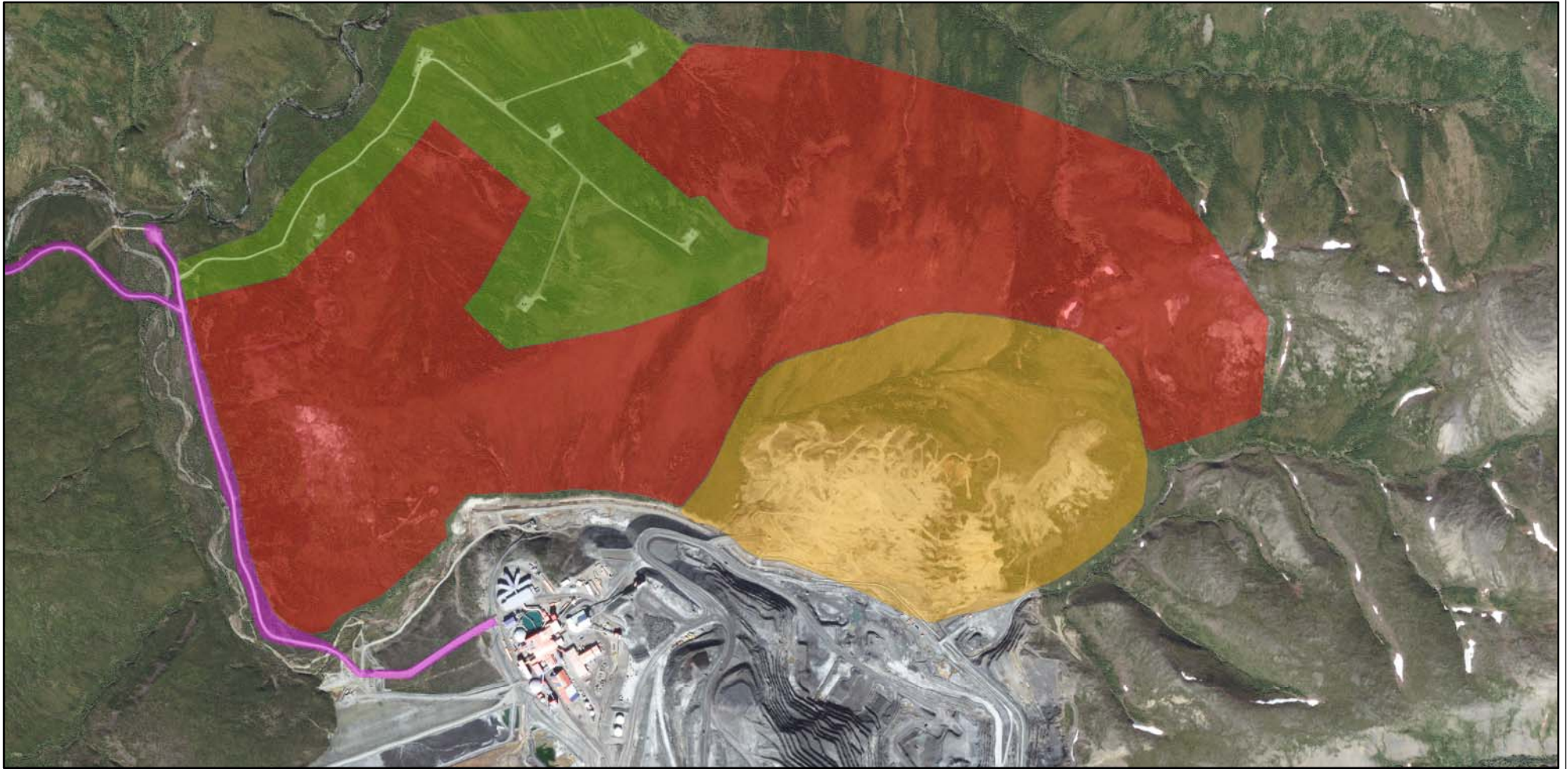
- [Integrated Plan for the Management of Cultural Resources in the Red Dog Project Area](#)
- [Red Dog Operations Cultural Resource Site ArcGIS Database](#)





The following Documents are available to all personnel.

- Restricted Access Maps

Attachment II
Red Dog Mine – Restricted Area Map
Aqqaluk Pit Area

Red Dog Mine - Restricted Area Map Aqqaluk Vicinity



-  Road open for off hours use
-  Aqqaluk Exploration - Notify Mine Shift Supervisor prior to entry
-  Natural Gas Exploration - Gas Field Safety Training required
-  Restricted Entry - Environmental Department approval required

