



THE STATE
of **ALASKA**

DIVISION *of* MINING,
LAND *and* WATER

**MULTI-YEAR 2018-2022
MISCELLANEOUS LAND USE PERMIT
FOR HARDROCK EXPLORATION & RECLAMATION
PERMIT # 9785**

The Alaska Department of Natural Resources, Division of Mining, Land, & Water, in accordance with and subject to the requirements and general stipulations of Alaska Statute 27.19 (Reclamation), Alaska Statute 38.05 (Alaska Land Act); and Alaska Administrative Code Title 11, Chapter 86 (Mining Rights), Chapter 96 (Miscellaneous Land Use), and Chapter 97 (Mining Reclamation) does hereby grant a Miscellaneous Land Use Permit and Approved Reclamation Plan to:

**NOVA COPPER US INC.
TRILOGY METALS
609 GRNVILLE ST. SUITE 1150
VANCOUVER, BC CANADA V7Y 1K4**

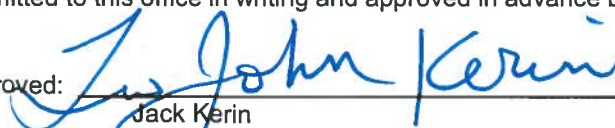
This permit is for the activities upon State managed lands described in the Hardrock Exploration Application #9785 on mineral locations ADL 591222, 591223, 591235, 591249, 591250, 591264, 591265, 591279, 591280, 591295, 591296, 591310, 591311. All activities are subject to the Terms of Permit attached hereto and incorporated in this permit, as well as subject to the terms and conditions set forth in the application, including any proposed Plan of Operations or other documentation made part of the application, which terms and conditions are also incorporated in this permit. Should any Terms of Permit and terms and conditions set forth in the application conflict, the Terms of Permit shall control.

Effective dates of this permit/approval shall be 6/4/2018 through 12/31/2022, unless sooner revoked at will or for cause. In accordance with AS 27.19.050(c), you are required to file an Annual Reclamation Statement by December 31st each year this permit application is in effect, including photographs or video tape of the completed reclamation work. When submitting photography for approval, please photograph reclamation work prior to snowfall. Failure to submit this statement and photos may result in loss of exemption from reclamation bonding.

Activities may only be conducted on mineral locations listed in this authorization.

Changes to the intended Reclamation Plan described in Application for Permits to Mine in Alaska # 9785 shall be submitted to this office in writing and approved in advance before such work can begin.

Approved: _____


Jack Kerin
Permitting/Field Operations

Date: _____

6/14/18

TERMS OF PERMIT

Sec 1. RECLAMATION STIPULATIONS:

In accordance with AS 38.05 (Alaska Land Act), approval of your application is hereby granted and the following reclamation stipulations will be used:

- a. Topsoil and overburden muck, not promptly redistributed to an area being reclaimed, shall be separated and stockpiled for future use. This material shall be protected from erosion and contamination by acidic or toxic materials and shall not be buried by broken rock.
- b. The area reclaimed shall be reshaped to blend with surrounding physiography using strippings, and overburden, then be stabilized to a condition that shall retain sufficient moisture to allow for natural revegetation.
- c. Stockpiled topsoil, overburden muck and organic material shall be spread over the contoured exploration to promote natural plant growth.
- d. Exploration trenches shall be backfilled and the surface stabilized to prevent erosion. Brush piles, stumps, topsoil, and other organics shall be spread on the backfilled surface to inhibit erosion and promote natural revegetation. Exploration trenches will have water bars installed as needed for erosion control. Exploration trenches on state lands shall be flagged and signs posted to notify the public of the existence of the open trenches. All exploration trenches shall be reclaimed by the end of the exploration season in which they are constructed, unless specifically approved by the Division of Mining, Land & Water.
- e. Shallow auger holes (limited to depth of overburden) shall be backfilled with drill cuttings or other locally available material in such a manner that closes the hole to minimize the risk to humans, livestock and wildlife.
- f. All drill hole casings shall be removed or cut off at, or below, ground level.
- g. All drill holes shall be plugged by the end of the exploration season during which they are drilled, unless otherwise specifically approved by the Division of Mining, Land & Water (See Special Stipulations for unreclaimed drill holes).
- h. All drill holes shall be plugged with bentonite holeplug, a benseal mud, or equivalent slurry, for a minimum of 10 feet within the top 20 feet of the drill hole in competent material. The remainder of the hole will be backfilled to the surface with drill cuttings. If water is encountered in any drill hole, a minimum of 7 feet of bentonite holeplug, a benseal mud, or equivalent slurry shall be placed immediately above the static water level in the drill hole. Complete filling of the drill holes, from bottom to top, with a bentonite holeplug, benseal mud, or equivalent slurry is also permitted and is considered to be the preferred method of hole closure.
- i. If artesian conditions are encountered, the operator shall contact the Department of Environmental Conservation (907) 451-2101 for hole plugging requirements.
- j. Upon completion of drilling activity, drill pads shall be reclaimed as necessary, including reseeding, to encourage natural revegetation of the sites and protect them from erosion.
- k. Roads and surface disturbance shall be held to a minimum. Exploration roads, drills pads and trenches shall be constructed in such a manner that vegetation and topsoil will not be buried beneath overburden or broken rock. This may require the use of a track excavator for construction of these facilities on slopes so as to allow for segregation of materials during construction and subsequent reclamation. Exploration roads will have water bars installed for erosion control, and at the end of the project will be reclaimed by backfilling, contouring, and spreading of organic rich overburden to promote stabilization and natural revegetation.

Sec 2. OPERATION OF VEHICLES OUTSIDE OF CLAIM BLOCK: N/A

Sec 3. GENERAL PROVISIONS: Operations under this permit shall be conducted in conformance with applicable Federal, State, and local laws and regulations now, or hereafter, in effect during the life of the permit.

Sec 4. SURFACE USE. A locator does not have exclusive use of the surface of the location. A locator may not restrict public access to the surface without approved authorization. (11 AAC 86.145) Issuance of this permit is not automatic authorization to restrict public access. In accordance with Alaska Statute 02.20.050, no airstrip, public or private, may be blocked or rutted in such a way as to endanger aircraft.

Sec 5. SURFACE STRUCTURES: Camp facilities are not required, or authorized.

Sec 6. OTHER OPERATIONS:

- a. The Division reserves the right to grant additional authorizations to third parties for compatible uses on or adjacent to the land under this authorization. This authorization is subject to all valid existing rights in and to the land under this authorization. The State of Alaska makes no representations or warranties whatsoever, either expressed or implied, as to the existence, number, or nature of such valid existing rights.
- b. Where this permit grants the right to enter land owned, leased, or otherwise lawfully occupied by another, the permittee shall make provisions before entering the land to pay for all damages sustained by said owner, lessee, or lawful occupant by reason of entering upon said land. (AS 38.05.130).

Sec 7. ALASKA HISTORIC PRESERVATION ACT: The Alaska Historic Preservation Act (AS41.35.200) prohibits the appropriation, excavation, removal, injury, or destruction of any State-owned historic, prehistoric (paleontological) or archaeological site without a permit from the Commissioner. If cultural or paleontological resources are inadvertently discovered as a result of or during the activities authorized by this plan approval, all activities which would disturb such resources shall be stopped and measures taken to protect the site. The State Historic Preservation Officer (907-269-8722) shall be contacted immediately so that compliance with state laws may begin. If burials or human remains are found, in addition to the State Historical Preservation Officer, the State Troopers are to be notified immediately.

Sec 8. DISPOSAL OF BUILDINGS, STRUCTURES, AND DEBRIS ON STATE LAND: A miner shall remove, dismantle, or otherwise properly dispose of buildings and structures constructed, used, or improved on state land, unless granted written authorization for the structures to remain. A miner shall remove or otherwise properly dispose of all equipment, scrap iron, tools, piping, hardware, chemicals, fuels, waste, and general mining debris on state lands in a manner approved by ADEC ((11 AAC 97.210) and 11 AAC 96.040(f)). All structures, equipment, and debris remaining unclaimed on state land 180 days after the claims are no longer valid, are subject to disposition by the state as provided in 11 AAC 97.630. The locator shall pay to the state all costs of moving, storing, and disposing of such structures, equipment, and debris. The state shall not be responsible for any damages to or loss of structures and equipment caused by the moving, storing, or disposal.

Sec 9. INSPECTION AND ENTRY: Permittee shall permit the authorized representatives of the Division to enter into and upon the area and facilities covered under this plan approval at all reasonable times without notice.

Sec 10. VIOLATIONS: This authorization is revocable immediately upon violation of any of its terms, conditions, stipulations, nonpayment of fees, or upon failure to comply with any other applicable laws, statutes and regulations (federal and state). Should any unlawful discharge, leakage, spillage, emission, or pollution of any type occur due to permittee's, or its employees', agents', contractors', subcontractors', licensees', or invitees' act or omission, permittee, at its expense shall be obligated to clean the area to the reasonable satisfaction of the State of Alaska. A permittee who is charged & convicted of any violation of state hunting, trapping, and/or fishing license may be subject to revocation of this permit.

Sec 11. FUEL AND HAZARDOUS SUBSTANCES: Secondary containment shall be provided for fuel or hazardous substances in accordance with EPA Emergency Spill Response Regulations.

- a. Container marking. All independent fuel and hazardous substance containers shall be marked with the contents and the permittee's name using paint or a permanent label.
- b. Fuel or hazardous substance transfers. Secondary containment or a surface liner must be placed under all container or vehicle fuel tank inlet and outlet points, hose connections, and hose ends during fuel or hazardous substance transfers. Appropriate spill response equipment must be on hand during any transfer or handling of fuel or hazardous substances to respond to a spill of up to five gallons. Transfer operations shall be attended by trained personnel at all times.
- c. Storing containers within 100 feet of water bodies. Containers with a total capacity larger than 55 gallons which contain fuel or hazardous substances shall not be stored within 100 feet of a water body.
- d. Exceptions: The Authorized Officer may under unique or special circumstances grant exceptions to this stipulation on a case-by-case basis. Requests for exceptions should be made to the Authorized Officer.

Sec 12. NOTIFICATION: The permittee shall immediately notify the Division of Mining, Land & Water and the Department of Environmental Conservation, by telephone, of any unauthorized discharges of oil to water (including

tundra); any discharge of hazardous substances other than oil; and any discharge of oil greater than 55 gallons solely to land and outside an impermeable revetment. If a discharge is greater than 10 gallons but less than 55 gallons it must be reported within 48 hours by telephone or fax. If a discharge is less than 10 gallons it may be reported in writing on a monthly basis. If an unauthorized discharge greater than 55 gallons is made to a secondary containment, it must be reported within 48 hours by phone or fax.

The DNR hour spill report number is (907) 451-2678; the fax number is (907) 451-2751. The DEC spill report number, for the Northern Region, is (907) 451-2121; the Southcentral Region is (907) 269-7548. The DEC 24-hour report number is (800) 478-9300. Division of Mining, Land & Water and ADEC shall be supplied with all follow-up incident reports.

Sec 13. CHANGE OF ADDRESS: Any change of address must be submitted in writing to the Division at 3700 Airport Way, Fairbanks, AK 99709-4699.

Sec 14. OTHER PERMITS: Be advised that issuance of this permit does not relieve the applicant of the responsibility of securing other permits required by Federal, State, or local authorities. Neither does this approval constitute certification of any property right nor land status claimed by the applicant.

Sec 15. SAVE HARMLESS: The recipient of this permit (permittee) shall indemnify, save harmless, and defend the Department, its agents and its employees from any and all claims, actions or liabilities for injuries or damages sustained by any person or property arising directly or indirectly from permitted activities or the permittee's performance under this permit. However, this provision has no effect, if, and only if, the sole proximate cause of the injury is the Department's negligence.

Sec 16. DEFAULT: If permittee should fail to comply with the terms and stipulations contained in this permit, the provisions of the Miscellaneous Land Use Regulations (11 AAC 96) and (AS 27.19), Reclamation Act, and after receiving written notice, fails to remedy such default within the time specified in the notice, the Director may cancel this permit.

Sec 16. APPEAL: A person affected by this decision may appeal it, in accordance with 11 AAC 02. Any appeal must be received within 20 calendar days after the date of issuance of this decision, as defined in 11 AAC 02.040(c) and (d), and may be mailed or delivered to the Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska, 99501; faxed to 907-269-8918, or sent by electronic mail to dnr.appeals@alaska.gov. This decision takes effect immediately. If no appeal is filed by the appeal deadline, this decision becomes a final administrative order and decision of the department on the 31st day after issuance. An eligible person must first appeal this decision in accordance with 11 AAC 02 before appealing this decision to superior court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.

All land use activity is subject to the Generally Allowed Uses on State Land as listed in 11 AAC 96.020. Questions concerning these regulations or this permit should be directed to the State Division of Mining Land & Water, Northern Regional Office, 3700 Airport Way, Fairbanks, AK 99709-4699; or by telephone to (907) 451-2736.

******Special Stipulations****Please include the following stipulation under the Special stipulations section of all hard rock authorizations.**

Special Stipulations:

Fire Prevention, Protection, and Liability:

- a. The applicant shall take all reasonable precautions to prevent and suppress forest, brush, and grass fires and shall assume full liability for any damages to state land resulting from the negligent use of fire.
- b. The State of Alaska is not liable for damage to the applicant's personal property and is not responsible for forest fire protection of the applicant's activity.

Annual Exploration / Reclamation Report:

You are required to file an Annual Exploration Report by December 31st of each year; please insure that your report contains the following information:

- A written narrative describing your activities and the reclamation measures utilized at all disturbances.
- A topographic map showing the portion of the claim block where surface disturbing exploration activities have occurred. The plan map should be at a scale of 1"=1/2 mile, or other appropriate scale sufficient to illustrate: existing trails and roads; new trails and roads; drill hole locations (other than shallow auger holes); trench locations; the camp location; and, any other surface disturbances (please distinguish between reclaimed and unreclaimed features).
- A photo, with appropriate caption, of each reclaimed drill site and exploration trench.
- A photo of representative sections of any new road or trail construction.
- A detailed description of the methods used to plug the drill holes.
- A list of Mining Claims by ADL# that contain unreclaimed disturbance at the end of the year and a total acreage that remains unreclaimed.

Water Use:

In any fish bearing waters, each water intake structure shall be centered and enclosed in a screened box designed to prevent fish entrapment, entrainment or injury. The effective screen opening may not exceed ¼ inch. To reduce fish impingement on screened surfaces, water velocity at the screen/water interface may not exceed 0.5 feet per second when the pump is operating.

Drill Hole Special Stipulations:

- a. Drilling mud, and cuttings shall not be discharged into lakes, kettle ponds, streams, rivers or wetlands.
- b. When ground sumps or other water containment systems are used they shall allow solids to sufficiently settle prior to backfilling and be reclaimed in a manner which reasonably prevents oxidation.
- c. If a drill hole is to not be reclaimed prior to the end of the exploration season, it shall be capped and have snow poles installed to mark its location.

Commencement of permitted activities deems an acceptance of these stipulations.