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GENERAL WATERWAY/WATERBODY APPLICATION  
ALASKA DEPARTMENT OF NATURAL RESOURCES  
Office of Habitat Management and Permitting  
[Office Locations](#)

**A. APPLICANT**

1. Name: Redfern Resources Ltd
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Telephone: 604 669-4775 Fax: 604 669-5330
3. Project Coordinator/Contractor:  
Name: \_\_\_\_\_  
  
Address: \_\_\_\_\_  
Email Address: \_\_\_\_\_  
  
Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

**B. TYPE AND PURPOSE OF PROJECT:** Transportation system using an air cushion barge, shallow-draft tug and amphitrac (amphibious vessel) to transport ore concentrate and mine supplies along the Taku River.

**C. LOCATION OF PROJECT SITE**

1. Name of River, Stream, or Lake: Taku River. Lower Taku 111-32-10320; 58.424 Latitude; -133.969 Longitude. Upper Taku River 111-32-10320; 58.582 latitude; -133.653 longitude.  
  
Anadromous Stream No: 111-32-10320
2. Legal Description: Township \_\_\_\_\_ Range \_\_\_\_\_  
  
Meridian \_\_\_\_\_ Section \_\_\_\_\_ USGS Quad Map \_\_\_\_\_
3. Plans, Specifications, and Aerial Photograph. [See specific instructions](#)

**D. TIME FRAME FOR PROJECT:** 01/2008 TO 12/2018 (m/d/yy)

**E. CONSTRUCTION METHODS:**

1. Will the stream be diverted?  Yes  No  
  
How will the stream be diverted? \_\_\_\_\_  
  
How long? \_\_\_\_\_
2. Will stream channelization occur?  Yes  No

3. Will the banks of the stream be altered or modified?  Yes  No

Describe: \_\_\_\_\_

4. List all tracked or wheeled equipment (type and size) that will be used in the stream (in the water, on ice, or in the floodplain):

**Open Water Season:**

Amphitracs will be used to move the ACB across the tidal flats during the fall and spring seasons, when the depth of water in the river channel is insufficient to operate a shallow-draft tug. Depending on river stage at Canyon Island, amphitracs will be used to winch the ACB across the sand bar on the east side of Canyon Island, when there is insufficient depth in the east channel to transport the ACB around the island using the shallow draft tug.

**Winter Operations**

Once the river has frozen, amphitracs will be used to move the ACB along the river corridor. Winter operations will mostly be on low-pressure rubber tires that will travel over ice/snow. The amphibious nature of the amphitracs will allow these vessels to transit from open water to ice, when necessary.

The dimensions of the amphitrac are found in the attached Operations Plan, Section 3.3.

How long will equipment be in the stream?

The transportation system is year-round, and will require, on average, six round trips/week. The period of time that the amphitrac will operate on the river includes the winter (frozen) season from early November to late March, as well as the transition seasons (fall and spring) to transport the ACB across the tidal flats as described above. For further details on proposed operation of the system, please refer to Volume 1, Project Description.

5. a. Will material be removed from the floodplain, bed, stream, or lake?  Yes  No

Type: \_\_\_\_\_

Amount: \_\_\_\_\_

- b. Will material be removed from below the water table?  Yes  No

If so, to what depth? \_\_\_\_\_

Is a pumping operation planned?  Yes  No

6. Will material (including spoils, debris, or overburden) be deposited in the floodplain, stream, or lake?  Yes  No

If so, what type? \_\_\_\_\_

Amount: \_\_\_\_\_

Disposal site location(s): \_\_\_\_\_

7. Will blasting be performed?  Yes  No

Weight of charges: \_\_\_\_\_

Type of substrate: \_\_\_\_\_

8. Will temporary fills in the stream or lake be required during construction (e.g., for construction traffic around construction site)?  Yes  No

9. Will ice bridges be required?  Yes  No

**F. SITE REHABILITATION/RESTORATION PLAN:** On a separate sheet present a site rehabilitation/restoration plan. [See specific instructions](#)

Not applicable to the proposed barging operations.

**G. WATERBODY CHARACTERISTICS:**

**Taku Tidal Flats:**

Width of stream: 0.5 to 1.4 miles (see Figures 1 and 5 in Operations Plan)

Depth of stream or lake:

See discussion of channel depths and tidal influence in Section 2.1.1 Operations Plan. See also: Volume 1, Project Description, Appendix A, Channel Depth Analysis of the Lower Taku River. Channel depth depends on river discharge and tidal influence throughout the year.

Type of stream or lake bottom (e.g., sand, gravel, mud): sand, mud

Stream gradient: < 1%

**Canyon Island:**

Width of stream: East Channel: 400-600 ft. wide (see Figure 8, Operations Plan)

Depth of stream or lake: 0 – 4 ft. depending on river stage.

Type of stream or lake bottom (e.g., sand, gravel, mud): coarse sand and gravel

Stream gradient: < 2%

**H. HYDRAULIC EVALUATION:**

1. Will a structure (e.g., culvert, bridge support, dike) be placed below ordinary high water of the stream?  Yes  No

If yes, attach engineering drawings or a field sketch, as described in [Step B](#).

For culverts, attach stream discharge data for a mean annual flood (Q=2.3), if available.

If applicable, describe potential for channel changes and/or increased bank erosion:  
\_\_\_\_\_

2. Will more than 25,000 cubic yards of material be removed?  Yes  No

If yes, attach a written hydraulic evaluation including, at a minimum, the following:  
potential for channel changes, assessment of increased aufeis (glaciering) potential,  
assessment of potential for increased bank erosion.

**I HEREBY CERTIFY THAT ALL INFORMATION PROVIDED ON OR IN CONNECTION WITH THIS APPLICATION IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.**



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Signature of Applicant

4 December, 2007

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Date