FH# FH09-I-0001
(Office Use Only)

GENERAL WATERWAY/WATERBODY APPLICATION
ALASKA DEPARTMENT OF FISH AND GAME
Division of Habitat
Office Locations

A. APPLICANT

1. Name: Redfern Resources Ltd.
2. Address (Mailing): Suite 800-1281 West Georgia Street. Vancouver BC.

   Email Address: tim.davies@redcorp-ventures.com

   Telephone: (604) 669-4775 Fax: (604) 669-5330

3. Project Coordinator/Contractor:

   Name: Tim Davies

   Address: as above

   Email Address: as above

   Telephone: 778-558-4842 Fax: _____

B. TYPE AND PURPOSE OF PROJECT:

Transportation system using an air cushion barge, shallow-draft tug and amphibious vehicles 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.

or 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

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):

Equipment	**Size**	**Number**
Air Cushion Barge	600	3
Amphibious Tractors (ATs)		
Hagglunds	6.5	2
Morgans	20	2
TAVs	4.6	2
Snow Grooming Machines		2

Further details on equipment are provided in the attached *Operations Plan, Section 3* (See Table 4).

How long will equipment be in the stream?
The transportation system is year-round, and will require, on average, six round trips/week. For further details on proposed operation of the system, please refer to the attached Operations Plan, Section 2.2

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: *Channel Depth Analysis of the Lower Taku River, Gartner Lee Limited, 2007*." 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: 400-600ft. 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.

October 24, 2008

_____ _____

Signature of Applicant Date

FH# FH09-I-0001
(Office Use Only)

ALASKA DEPARTMENT OF FISH AND GAME
FISH HABITAT PERMIT APPLICATION
SPECIFIC INSTRUCTIONS

NOTE: Provide as much information as possible. If you need assistance, please contact the nearest ADF&G Division of Habitat office. The ADF&G reserves the right to require additional information for the proper protection of fish and game.

Step A: Provide your name, address, and telephone number and the name, address, and telephone number of the contractor who will be doing the work, if known.

Step B: Describe the type of project (e.g., bridge, culvert, utility line placement, impoundment structure, bank stabilization, channelization, low water crossing, log removal, etc.) and the purpose of the project. A brief description of alternatives considered would be useful but is not required. Attach additional sheets as necessary. Back to Form

Step C: **1.** Name of the waterbody in or adjacent to which the project will occur.

2. For Anadromous Stream numbers, refer to the Atlas to the Catalog of Waters Important for Spawning, Rearing or Migration of Anadromous Fishes.

3. a. Provide plans (or field sketch) showing the following as a minimum: access to the site, plan view showing all project features and dimensions, or crossing/fording sites; material removal plans should also include, at a minimum, the following: 50' contour lines; nearby watercourses and lakes; location of facilities (i.e., screening, washing, and crushing plants, and commercial and private buildings); aliquot parts identified in order they are to be mined; site where fuel will be stored; a cross section view of the material site showing current land and water elevations and bank slopes and final excavation grades and slopes; and project expansion sites (scale no greater than 1 in. = 400 ft.)

b. Provide specifications, if available; and

c. Provide a current aerial photograph, if available. Back to Form

Step D: Indicate the time of year when project construction will occur. Is the project temporary or permanent?

Step E: 1. Provide information if applicable on how you will divert the stream.

2. Indicate if channelization will occur.

3. Provide information, if applicable, on how you will alter or modify the banks of the stream.

4. List all vehicles or equipment by type and size that will be used in the stream.

5. Provide information, if applicable, on what type and amount of material will be removed from the floodplain, bed, stream, or lake.

6. Provide information, if applicable, on any material you will deposit in the floodplain, stream, or lake.

7. Provide information, if applicable, on any blasting you intend to do in the floodplain, stream, or lake.

8. Indicate if temporary fills will be required.

9. Indicate if ice bridges will be required.

Step F: What precautions will be taken to insure that fish and other aquatic organisms are protected from adverse impacts? Outline plan for restoring, rehabilitating, or re-vegetating the site if channel or bank alterations occur. What precautions will be taken to maintain State Water Quality Standards? Back to Form

Step G: Provide the waterbody characteristics at the site of the project.

Step H: Provide available hydraulic information for the types of projects indicated. For information on selecting a culvert size that will ensure fish passage, consult ADF&G permitters or references available at Division of Habitat offices.