



**Grand River Ironsands
Muskrat Falls Sampling Program**

**REGISTRATION TO THE
NEWFOUNDLAND AND LABRADOR
DEPARTMENT OF ENVIRONMENT
AND CONSERVATION**

**Prepared by
Stassinu Stantec Limited Partnership**

October 2011

GRAND RIVER IRONSANDS
Muskrat Falls Sampling Program

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Appendix A Mineral Exploration Approval: Upriver Muskrat Falls Property, Licence 017907M

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GRAND RIVER IRONSANDS
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1.0 PROJECT AND PROPOSER IDENTIFICATION

Name of Undertaking: Muskrat Falls Sampling Program

Proposer:

- (i) Name of Corporate Body: GRAND RIVER IRONSANDS
- (ii) Address: 1809 Barrington Street, Suite 805,
Halifax, NS B3J 3K8
- (iii) President and Director Francis MacKenzie, MBA
- (iv) Principal Contact Person for Purposes of Environmental Assessment:
Dave MacNeill
Tel: (902) 223-9600
Fax: (902) 435-0023

2.0 THE UNDERTAKING

2.1 Nature of the Undertaking

The iron sands of Labrador present a unique opportunity to develop a global environmental model for iron making. This resource is under claim to Grand River Ironsands (GRI) who intends to develop a mining operation that would extract iron from these sands for the production of high quality pig iron. Potential iron deposits have been identified at several locations within the Upper Lake Melville area of Labrador.

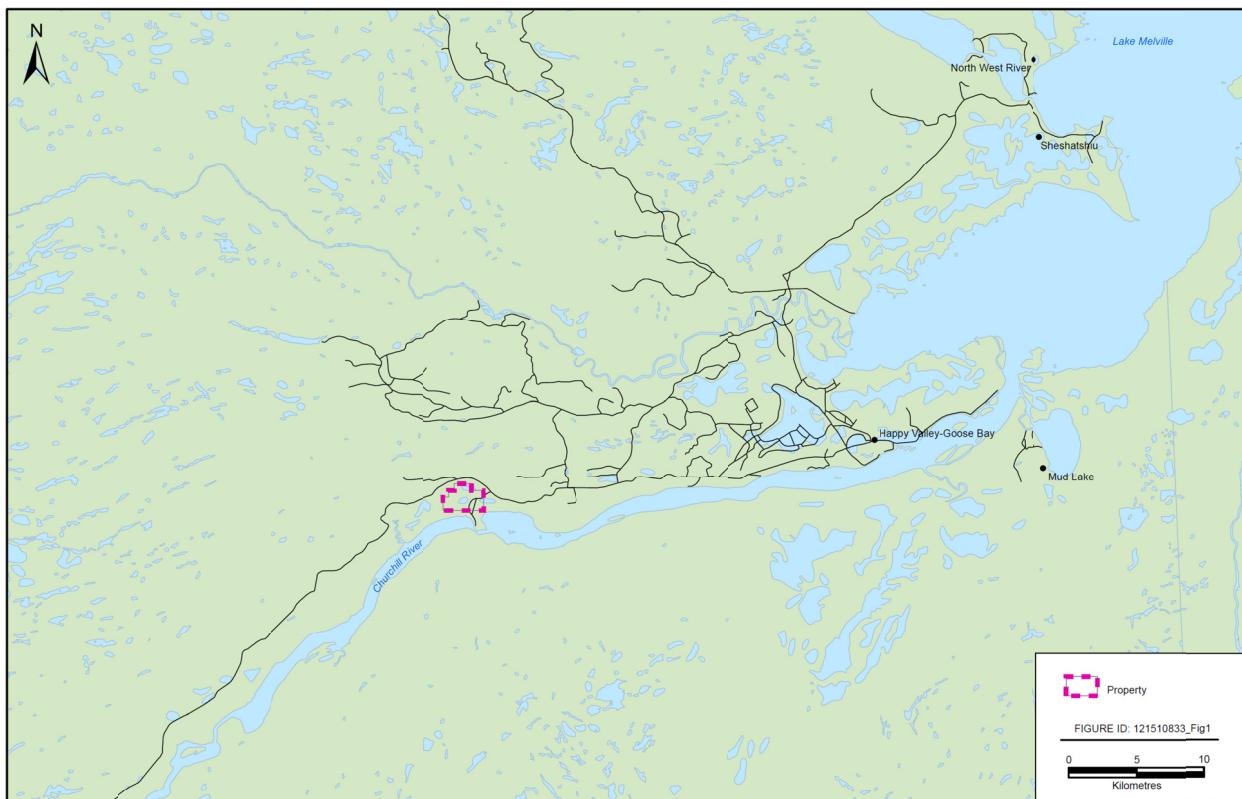
As part of its approved mineral exploration activity (e.g., Appendix A), GRI drilled 15 exploratory holes on a 500m grid spacing on Mineral License 017907M, 59 drill holes on 018325M and 21 drill holes on License 017911M. The results were encouraging so GRI began a second round of drilling on a 250 m grid spacing to delineate the iron resources on these three licenses to NI-43-101 Indicated Resource Standards.

An economic model developed by GRI indicates it is feasible to develop the iron sand deposit if a pig iron plant is constructed at Goose Bay. A large proportion of the iron ore contains titanium as the mineral ilmenite. This impurity can only be removed by smelting the ore in a pig iron plant. The deposit and economic model have been marketed to major investment and steel producing companies around the globe. The model shows the Goose Bay operation could be a globally competitive pig iron producer.

The next step will be to undertake a sampling program on one of the three mineral licenses. The sample will be used to 1) test a pilot sand processing plant and 2) conduct an iron ore melt test in commercial electric furnace. The undertaking will involve extracting a 7,000 tonne sample of raw sand, trucking the sand to an offsite hangar, processing the sample through the pilot plant and then back haul trucking the clean sand to the extraction site for use in reclamation. In consideration of exploration results to date and to minimize effects to the environment, GRI is proposing to collect the required sample at its 'Upriver Muskrat Falls Property' (Muskrat Falls). This property is immediately adjacent to the existing access road to Muskrat Falls (Figure 1) that has been approved for mineral exploration activity by the Provincial Government (Appendix A).

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Figure 1 Muskrat Falls Sampling Location



2.2 Purpose/Rationale of the Undertaking

Grand River Ironsands Inc. (and its predecessor Markland Resources) started exploring the iron sands within the lower Churchill River watershed in 2002. Between 2002 and 2008, exploration focussed on channel bars within the Churchill River, located east of Muskrat Falls. In 2008, the exploration targets were expanded to include beach strand lines located downstream of the causeway on Route 510, and raised river terraces and associated dune fields located north and south of the Churchill River between Muskrat Falls and Gull Island. Drilling results obtained to date indicate the potential for a large deposit of iron ore on the Churchill River claims. Other components of the iron resource evaluation are ongoing.

The next critical component of this phase of the exploration program, and the purpose of this Undertaking Registration, is the collection of a sample that would be evaluated in a melt test in a commercial plant. The sample would be used to fully evaluate the potential of the identified deposit for future mining. The proposed melt test involves a full commercial kiln with a continuous batch processing for a 24 hr period. This test would determine whether the technology for melting the iron sand sample is commercially viable. The proposed plant (located outside of Labrador) will use existing electric technology to melt Goose Bay iron ore into pig iron

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pellets. Results of this sampling and testing program will determine future mining opportunities in the region. Traditionally, pig iron is produced using coal or natural gas fired furnaces. Production of pig iron using electric fired furnaces would open the door to positive changes for the pig iron industry because it could ultimately lead to significant global reductions in CO2 emissions. Labrador has the opportunity to lead the world in this global change model by coupling this new production model to the Lower Churchill hydro-electric power production.

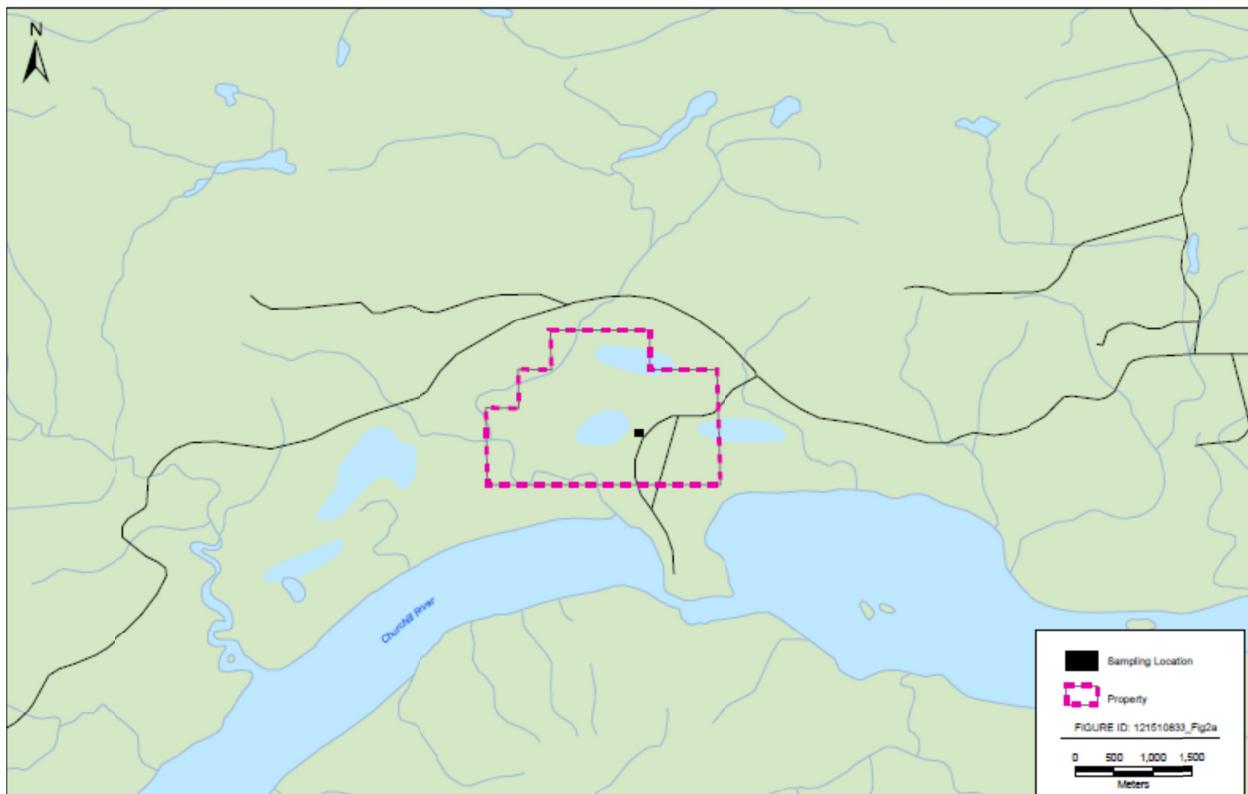
Being able to fulfill the sample extraction step prior to winter freeze would allow GRI the opportunity to evaluate the results of the exploration and melt tests over the winter months so the Company is able to prepare for the next advanced phases of exploration. The Project requires successful fulfillment of this next investigative step to confirm the potential use of the electric furnace technology for pig iron production. If the test is successful the doors will open for financing of the required exploration, environmental, engineering and plant design work required to move the Project into the banking feasibility stage. Over \$6 million has been invested to date in understanding this resource and identifying the viability of this secondary processing opportunity. The next phases of exploration and development would see a much larger injection of capital into the community of Goose Bay.

3.0 DESCRIPTION OF THE UNDERTAKING

3.1 Geographic Location

The sampling location is adjacent to the existing Muskrat Falls access road, 27 km west of Happy Valley-Goose Bay along Route 500 (i.e., Phase I Trans-Labrador Highway) (Figure 2). The deposit is within a 15-20 m high sand dune –sand bar complex that is part of the Mineral Exploration License Claim 017907M (Appendix A). The license area is approximately 30 km west of the Town of Happy-Valley Goose Bay, along the Trans Labrador Highway, and is immediately adjacent to the existing access road to Muskrat Falls. Photo 1 shows exploration drilling by GRI during 2011.

Figure 2 Plan View of Muskrat Falls Sampling Location



	<p>FIGURE 2</p> <p>Plan View of Muskrat Falls Sampling Location</p>
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Photo 1 Drilling hole during 2011 delineation

3.2 Environmental Setting

3.2.1 Geology

The black mineral sands are found in a thick sequence of unconsolidated marine and alluvial sediments deposited in the Churchill River and surrounding lowlands between Gull Island and Goose Bay (Hamilton Inlet). The inlet forms part of a major coastal reentrant that penetrates the Labrador coast for approximately 200 km. This fiord-like basin is a composed of a series of down faulted bedrock grabens. The western most graben forms a small sedimentary basin between Gull Island and Muskrat Falls. This basin was flooded by marine waters during the last period of glaciation.

River cut terraces seen along the banks of the present river east of Gull Island are composed of fluvial sand and gravel deposits sitting on thick sequences of marine clays. Due to isostatic rebound since the retreat of glaciers approximately 10-20,000 years ago, the ancient river bars now sit 30-50 m above current river water levels. The relative change in sea level in the Goose Bay -Lake Melville area varies (Emory-Moore and Meyer 1991; Smith 1992; Clark and Fitzhugh 1992), but is estimated to be between 120 and 135 m. Marine clays which underlie these bars

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are exposed in some of the river banks east of Gull Island. Large dunes are developed on some of the ancient river bars, particularly along the south side of the river between Gull Island and a point located approximately mid-way between Gull Island and Muskrat Falls. The raised bars and dune fields are the focus of the exploration on the claim licenses in this area.

3.2.2 Biological Environment

The sample location is completely within dry black spruce and lichen habitat that is considered common within the lower Churchill River valley (Nalcor Energy 2009). This ecotype is characterized by small patches of black spruce within a carpet of ground lichens. Shrub cover consists mainly of black spruce and Labrador tea (Photo 2).



Photo 2 Dry black spruce and lichen habitat at the Muskrat Falls sampling location

The site is of relatively low productivity for plant and wildlife species. Extensive surveys for plant species in association with the proposed Project footprint for the lower Churchill River Hydroelectric Project have not located any listed plants in the river valley (Minaskuat 2008). Of the approximately eight regionally uncommon plants located in the lower Churchill River watershed (Stantec 2010), none were associated with the dry black spruce and lichen habitat nor are they expected in such habitat.

Similarly, the timing of the proposed activity (i.e., post-breeding period for all wildlife in the area), its location (e.g., adjacent to existing access road), size of disturbance (within a 100m X 100m area) and type of habitat further limits any potential effects on wildlife – as is recognized through the existing mineral exploration approval. No waterbodies will be affected, therefore there are no issues with respect to fish habitat.

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3.2.3 Aboriginal and Stakeholder Communications

In terms of community involvement and communication, GRI has provided regular briefings with community leaders and regulators on the Project. The leaders of the Innu First Nation have shown strong support for the Project and two positions are made available for Innu representatives on the Company's board of directors. A letter of support for the Project and this next step from the Town of Happy Valley-Goose Bay and the Labrador North Chamber of Commerce are attached to this submission (Appendix B).

3.3 Infrastructure

No increased access is required as a result of this undertaking. GRI will use an existing access road that is immediately adjacent to the proposed sampling location (refer to Photos 3 to 5). A power source is not required at the sampling location. Excavation of the sand sample is proposed to occur during daylight hours only and no lighting will be required. At the time of writing, the access road to Muskrat Falls does not require any additional upgrading for the purposes of this sampling program. No structures will be erected on site other than a portable toilet and a weigh scale for the trucks.



Photo 3 View of sample location looking west from existing access road to Muskrat Falls

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Photo 4 View from sample location looking east towards existing access road to Muskrat Falls



Photo 5 View of existing sub-station from access road to Muskrat Falls (Sample site is located immediately to the right of this image).

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Any trees removed from within the 100m x 100m area of the sample will be cut into lengths for firewood and made available for local use. Stockpiling of material will not occur at the excavation site location with the exception of the organic material that would be retained and later used for revegetation. A topsoil depth survey [to the bottom of the B horizon (approximately 50 cm)] will first be completed to verify the organic layer and topsoil thicknesses, horizon sequencing as well as depth to subsoil to guide salvage operations in the field. Upon removal of the tree canopy and understory layers, topsoil will be salvaged from areas potentially affected by the sampling program, excluding those areas identified for use as temporary topsoil stockpiles. Note that topsoil will be salvaged a minimum of 5 m (greater in areas of geological instability) ahead of all pit faces, ensuring that valuable topsoil does not slough into the pit. At completion of the sampling program, re-contouring of the disturbed site will be used to stabilize areas of geological instability, mimic local topography and conform to that of the surrounding landscape to promote vegetation establishment. When replacing topsoil in forested environments, it is preferable that topsoil be spread such that it leaves a rough surface with variable thickness, and numerous micro-sites (through the placement of stumps and root wads) in an effort to promote establishment of a diverse native plant community. Under these environmental conditions and in light of the specific challenges posed by this environment (sandy soils, moisture regime, nutrient availability and climatic conditions), the rough surface will trap snow and improve soil moisture, trapping native seed and encouraging the eventual plant community which promotes native species.

Revegetation efforts will involve an erosion-controlling cover of seeded native grasses and legumes on the disturbed sites that will provide protection from raindrop erosion as well as contribute to the overall stability of the site. With time, pioneer woody vegetation will establish on these disturbed sites, performing the function of nutrient reservoirs, some of which are also nitrogen fixers and enhance the productivity of these sandy, fluvial soils. Trees and shrubs are considered much more effective than herbaceous growth in preventing wind erosion and preventing excessive moisture loss from exposed coarse-textured (i.e., sandy) soils by reducing evaporation. These assisted natural regeneration techniques will be supplemented with planting of native trees and shrubs where the availability of planting stock (native trees and shrubs) and herbaceous seed mixes are available.

To remove the material necessary, it is estimated that one excavator working in tandem with a front end loader will excavate the sample. The excavator will dig the sample and move it to a temporary load pile which will then be loaded onto the trucks using a front end loader. The excavator reach will allow it to safely excavate material from the active face. Upon completion of the sample extraction, the site will be remediated by returning the separated sand back to the pit, where it will be contoured and covered by the original retained organic material.

The only equipment needed to be fueled at the sampling site will be the excavator and front end loader. The contractor will be expected to submit a re-fueling plan which will be in accordance with provincial government regulations. The haul trucks (highway approved) will be refueled within the Town of Happy Valley-Goose Bay.

3.4 Sampling and Processing Operations

As indicated, GRI is currently conducting a resource drilling survey on approved licenses at 250 m spacing. Note that waterbodies are avoided by a 50 m buffer and are not being disturbed by this activity. The objective of the program is to define an NI43-101 indicated resource. Of particular interest at this point, is license 017907M in the vicinity of Muskrat Falls (Figure 2).

In terms of processing equipment to separate iron ore from the sands, products from two companies have been evaluated. Small bulk samples collected from the Churchill River bars and delta were beneficiated using modern processing technologies to produce saleable iron products first at the Eriez laboratory in Erie Pennsylvania. A second beneficiation test was completed on two bulk samples derived from drill core splits at the Outotec laboratory in Jacksonville, Florida.

Regarding smelt technologies, two laboratory scale firing tests were completed on iron ore derived from a sample collected in 2006. An American laboratory produced a pig iron piglet and slag from a Churchill River iron ore using a proprietary pellet blend and a proprietary electric fired kiln technology (Photo 6). The second firing test was completed at an Outotec laboratory in Frankfurt Germany. The Company tested the suitability of Churchill River iron ore for use in one of their SLRN plants. All these small-scale and experimental test results were positive.



Photo 6 Pig iron piglet and slag produced from Churchill River iron ore in 2006

The next critical component of this phase of the exploration program, and the purpose of this application, is the collection of a sample that would be evaluated in a melt test in a commercial plant. The sample would be used to fully evaluate the potential of the identified deposit for future mining. A 7,000 t (4,022 m³) raw sand sample is required to produce the 250 t of iron ore needed for this melt test. The sample will require extraction of a block measuring roughly 5.5 m (0.5 m of organic material) in depth by 28 m². However, the sample site is located on the side of a hill so the disturbed surface area will be slightly larger to compensate for the slope. We anticipate a disturbed site measuring less than 50 m².

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Note that the earlier testing was within a small-scale and experimental facility (Outotec completed preliminary testing towards the potential application of their technology referred to as SLRN, which is a coal based melting solution for the creation of pig iron. Subsequent laboratory tests on samples from existing materials in 2010 began to examine the electricity based processing solution proposed by Hoffman). The proposed melt test involves a full commercial kiln with a continuous batch processing for a 24 hr period. This test would determine whether the technology for the iron sand sample is commercially viable. The proposed plant (located outside of Labrador) will use existing electric technology to melt Goose Bay iron ore into pig iron pellets. Results of this sampling and testing program will determine future mining opportunities in the region.

Sample Extraction

Based on the requirement for a 250 t iron ore sample, it will be necessary to extract 7,000 t of raw sand. A single excavator and/or front end loader would collect the material immediately beneath the organic layer and load a series of haul trucks. Thus approximately 400 truck loads will be required assuming 17 t per highway haul truck for transport to a hangar facility for processing. Emissions during this phase of the undertaking will include local noise and air emissions from equipment that will have been inspected to ensure exhaust systems and mufflers are in good working condition. Workers at the site will be instructed to not engage in any hunting or other harassment of wildlife. No firearms or pets will be permitted on site. Daily safety meetings and any environmental awareness issues will be communicated to all site staff. Trucks will comply with imposed speed and other restrictions on the highway.

Sample Processing

At the hangar, municipal water supplies will be used to process the sands using an initial fill estimate of 1,000 gallons. Approximately 650 gallons/minute will be used from this supply in a closed loop system. This water will be mixed with the raw sand to facilitate separation using wet high intensity magnetic separation. A water collection and recirculation system will be used to reduce subsequent water needs once the system is operating. Approximately 10% of the water is lost to the processed sand piles so an additional 50 gallons/minute will be needed as replacement. During the process there will be an occasional requirement of 250 gallons/day for system cleaning. Some gravity separation (e.g., spirals) may also be used in conjunction with the magnet. This is a water based separation process. There will be no chemical or other additives involved in this separation. The discharge waste material would be the raw sands less the target iron ore materials. The approximately 6,700 t of sand would be returned to the sampling location at Muskrat Falls taking advantage of back haul opportunities using the 17 t trucks. A hydrocyclone will be used to dry the sand before returning it to the pit. Municipal approval will be sought for disposal of wash waters to the municipal sewer system. This amount will not be excessive as the water system is a closed circuit design within which 92% of the water is recirculated. Waste sand (e.g., silica sands stripped of heavy minerals) will be trucked back to the site where it will be used to contour the pit area as close as possible to its original topography. All systems in the hangar would be electrically powered so no emissions would be associated with their operation. This hangar is owned by Mr. Ian Strachan and is located on the north side of the airport at Happy Valley-Goose Bay. The same facility has been used to separate smaller samples of sand for previous testing.

3.5 Occupations

To complete the sampling program, GRI will issue an RFP for the sample extraction and hauling to local companies that would involve truck operators (occupational code 7411), front end loader and excavator operators (occupational code 7421). Depending on the configuration and capabilities of the successful contractor, this undertaking could employ approximately ten persons. The operation of the separation process in the hangar requires special skills and experience (e.g., machine calibration and management of flow rates) that will likely be supplied by GRI's technology partner from the United States.

3.6 Project Related Documents

Markland Resources and Grand River Ironsands undertook an extensive exploration program on their Churchill River Mineral Sands Licenses between 2002 and 2008. This included surface sampling and mapping, Pionjar percussion drilling, bank sampling, bulk sampling and beneficiation tests.

Markland Resources also undertook a limited Pionjar drilling survey on the terraces located along the south side of Churchill River below the Cartwright Road Bridge. The analytical data and drillhole locations are found in the Markland Resources assessment report compiled by Andjelkovic, Scott, and Scott (2006). The terraces are composed of sands deposited in ancient river bars or deltas. River bank channel samples were collected from these terraces along the Traverspine River approximately 3 km south of the Traverspine River Mouth. These samples were collected on the 30 m terrace described in Blake (1956) who noted the terrace had been dated at 2300 years B.P.

Local people have reported prospecting surveys along the Churchill River and its feeder streams between Muskrat Falls and Gull Island, but no reports could be found on file documenting this work. Placer gold was reported to be the exploration target for the prospectors.

In addition to approvals required for mining exploration (see Section 4.0), the following documents prepared by others may contain relevant information to this undertaking and/or the surrounding environs.

- Lower Churchill Hydroelectric Generation Project Environmental Impact Statement (Nalcor Energy 2009);
- The Five Year Operating Plan for Forest Management District 19A (Goose Bay), Operation Period January 1, 2008 – December 31, 2012;
- Environmental assessments conducted for Route 510 adjacent to the Project site; and
- DND environmental assessment and monitoring data gathered for the low-level training area and supersonic training areas.

4.0 APPROVAL OF THE UNDERTAKING

The approvals outlined in Table 4.1 will be required for the undertaking. Note that many important requirements to mitigate or eliminate potential environmental effects (e.g., historic resources) are already addressed within the Exploration Approval issued to GRI on 19 August 2011 (Appendix A).

Table 4.1 Required Permits Approvals and/or Authorizations

Permit, Approval or Authorization	Issuing Agency	Status
Exploration Approval	Department of Natural Resources	GRI currently has approval for drilling on the Muskrat Falls property. An application was submitted for the excavation on 29 September 2011.
Municipal Approvals	Town of Happy Valley-Goose Bay	GRI is in discussion with Town staff to determine if water usage is exclusively within the municipal jurisdiction.
Other		GRI has an Operator's Permit for working in the Fire Ban season, as well as a commercial cutting permit for the site for exploration purposes.

5.0 SCHEDULE

The sampling is scheduled to commence in the fall of 2011. It is necessary to carry out the operation before significant snowfall. The work is estimated to take 4-6 weeks depending on final capacity of the separation facilities that is currently estimated at 8t per hour.

6.0 FUNDING

The sample extraction and processing program will be financed by GRI with available funds; no government funding will be required.



September 29, 2011

Date

D.R. MacNeill, Vice President

7.0 REFERENCES

Andjelkovic, D., F. Scott and G. Scott. 2006. Work report on map staked license 11805M and 11807M, Goose Bay area, Labrador, NTS13F/8; Newfoundland and Labrador Geological Survey, Assessment File Report, 5 September 2006.

Bailey, D. G. 1979. The mineral potential of eastern Labrador; Newfoundland and Labrador Geological Survey, internal collection, 17 p.

Blake, W. Jr. 1956. Landforms and topography of the Lake Melville area, Labrador, Newfoundland; Geographical Bulletin, No. 9, p. 75-100.

Bridge, J. S. 2003. Rivers and floodplains, forms, processes and sedimentary record, Blackwell Publishing.

DeMont, G. J. 2009. Grand River Ironsands, Assessment Work Report 2008 Work Program License No. 011805M, 011806M and 011807M, Churchill River Mineral Sand Deposits, Happy Valley-Goose Bay Area, Labrador, NTS 13F/07-08.

Emory-Moore, M. and J.R. Meyer. DATE??? The origin and economic potential of the placer deposits in the Lake Melville and Porcupine Strand area of eastern Labrador, Newfoundland and Labrador Geological Survey, Open File LAB/0939, 21 p.

Hains, D. 2008. Assessment Work Report, 2007 Work Program, License No. 011805M, 011806M and 011807M, Churchill River Mineral Sand Deposits, Happy Valley-Goose Bay area, Labrador, NTS 13F/07-0

Mange, M. A. and D.T. Wright. 2007. Developments in Sedimentology Heavy Minerals in Use, Elsevier.

Mathieu, G. I. and M. Boisclair. 1990. Characterization and concentration of Newfoundland's heavy mineral sands; Report from Mineral Sciences Laboratories, CANMET, Energy Mines and Resources Canada, Project No.30.13.99, 7 p.

Meyer, J. 1990. Graphite, muscovite and heavy mineral sands exploration in Labrador, Current Research, Newfoundland and Labrador Department of Mines and Energy, Geological Survey Branch Report 90-1, p. 163-169.

Minaskuat Inc. 2008. Rare Plant Survey in the Lower Churchill River Valley. Prepared for the Lower Churchill Hydroelectric Project, Newfoundland and Labrador Hydro.

Nalcor Energy. 2009. Lower Churchill Hydroelectric Generation Project Environmental Impact Statement. Volume II Part A. St. John's, NL.

Schumm, S. A. 1977. The Fluvial System. The Blackburn Press.

Stantec Consulting Ltd. 2010. 2010 plant surveys in the vicinity of the lower Churchill River watershed. Prepared for Nalcor Energy and the Lower Churchill Hydroelectric Project, Newfoundland and Labrador Hydro, St. John's, NL.

APPENDIX A

**MINERAL EXPLORATION APPROVAL
UPRIVER MUSKRAT FALLS PROPERTY**

LICENCE 017907M

GRAND RIVER IRONSANDS
Muskrat Falls Sampling Program



Government of Newfoundland and Labrador
Department of Natural Resources
Mines Branch
Mineral Lands Division

August 19, 2011

E110175

Dave MacNeill
Grand River Iron Sands Inc.
1809 Barrington St.
Suite 805
Halifax, NS
B3J 3K8

Dear Mr. MacNeill:

**RE Exploration Approval (173 Geoprobe Drill Holes,
ATV Use & Fuel Storage)
& Notification Work
(Geology & Geochemistry)
for Grand River Iron Sands Inc.
on the Upriver Muskrat Falls Property
NTS 13F/07
Licences: 017907M**

Your proposed exploration program submitted in compliance with Section 5(4) of the *Mineral Act* has been reviewed and approved.

The following conditions apply :

1. The proponent must comply with any other Provincial and Federal Act or Regulation, or obtain all permits that may be required in connection with the exploration activity.
2. All personnel must comply with the *Mineral Regulations*, in particular sections 41 - 45 and section 46 which refers to the "Guidelines for Exploration and Construction Companies".
3. You are required to provide the Mineral Lands Division with:
 - a. 24 hour prior notification of mobilizing equipment to the project area;
 - b. two day prior notification of completion of the exploration activity;
 - c. a brief update of the progress of your exploration program when it is completed;
4. As per section 12(2) of the *Mineral Act*, when exploration work is to take place on private land or upon land where legal or equitable interests are held, the licensee will obtain prior written permission and forward copies to the department.
5. The development of the Lower Churchill Hydroelectric Generation Project (the "Project") may impact the rights, obligations, interests or privileges that you may hold as a result of the Government of Newfoundland and Labrador issuing to you a lease, licence, permit or other authorization with respect to the exploration, development or production of mineral

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resources. The lease, licence, permit or other authorization issued by the Minister of Natural Resources (the “Minister”) and any and all rights, obligations or privileges that are granted, conferred by or recognized in it may be subject to change or amendment at the discretion of the Minister and without notice as a result of or arising from the Project.

The holder of this lease, licence, permit or other authorization hereby acknowledges that the exercise of any right, interest or privilege hereby granted, conferred or recognized is subject to the exercise of the discretion of the Minister of Natural Resources to change or amend this instrument without notice and is a condition of its issuance and receipt and forms part of its terms. Neither the exercise of any right, interest or privilege by a person undertaking the development of the Project or the exercise of discretion by the Minister to change or amend the terms of this lease, licence, permit or other authorization gives rise to any right of any claim, redress, compensation or cause of action whatsoever should the interests of the holder be affected thereby.

6. The exploration program will be taking place within the Innu Nation Land Claim Area. The work area indicated in this application is within the Labrador Innu Settlement Area (LISA) identified in the New Dawn Agreement signed between the Province and the Innu Nation. Subject to finalization and ratification of a subsequent Final Agreement, any Major Development within LISA will require the developer to conclude an Impacts and Benefits Agreement with the Innu Nation. The company can view the substance of the New Dawn Agreement and related map on the web.
7. Your mineral exploration project is within the Department of National Defense Low Level Flight Training Area. You are required to coordinate with 5 Wing Goose Bay on all air traffic activities related to this project in order to prevent any potential conflicts with military training exercises. Please contact Mr. Silas Bird, Wing Community Liaison Officer, at 709-896-6958 for any further information.
8. If trees have to be cut to access the drill sites then you are advised to contact the nearest Natural Resources, Forest Resources Branch, local office to obtain a cutting permit before starting your exploration program.
9. Pursuant to Section 109 of the Forestry Act, industrial operations conducted on forest land during the forest fire season must be carried out under an operating permit available from the nearest district office of the Department of Natural Resources, Forest Resources Branch.
10. Please be advised on the provisions of the *Historic Resources Act*, protecting archaeological sites and artifacts, and procedures to be followed in the event that either are found:
 - a. A person who discovers an archaeological object in, on or forming part of the land within the province shall report the discovery forthwith to the Minister stating the nature of the object, the location where it was discovered and the date of the discovery.
 - b. No person other than one to whom a permit has been issued under this Act, who discovers an archaeological object shall move, destroy, damage, deface, obliterate, alter, add to, mark or in any other way interfere with, remove, or cause to be removed from the province that object.
 - c. The property in all archaeological objects found in, on or taken from the land within the province, whether or not these objects are in the possession of Her Majesty is vested in Her Majesty.
 - d. Should any archaeological remains be encountered, such as stone, bone or iron tools, concentrations of bone, charcoal or burned rock, fireplaces, house pits

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and/or foundations, activity in the area of the find must cease immediately and contact should be made with the Provincial Archaeologist in St. John's (729-2462) as soon as possible.

- e. Copies of the *Historic Resources Act*, and information on archaeology in the province may be obtained from the Provincial Archaeology Office upon request.
11. If harmful alteration, disruption, or destruction of fish habitat occurs as a result of a change in the information which has been provided, without prior DFO consultation then prosecution under the *Fisheries Act* may be initiated.
12. Pursuant to Section 106 of the *Wildlife Regulations*; A person shall not operate an aircraft, motor vehicle, vessel, snow machine or all-terrain vehicle in a manner that will harass any wildlife.
 - a. You are advised that helicopter supported exploration programs must be conducted in a manner that does not disturb, harass or harm any animal life that you encounter. This can easily be accomplished by avoiding concentrations of wildlife by rescheduling the planned activities for another day
 - b. Companies are advised to avoid, if possible, over-flying concentrations of caribou.
 - c. Under no circumstances should nesting raptors be approached, not even for a "harmless" look. The startle effect that helicopters have on nesting raptors can be detrimental and therefore either a 600m horizontal buffer from cliff faces or an altitude of 300 metres must be observed.
 - d. The breeding and brood rearing periods (May 15 - August 31) are considered critical to the Harlequin Duck, and disturbance should be minimized. During this critical period and a 300 metre horizontal buffer above ground level must be observed when crossing river valleys.
13. This approval is due to expire on December 31, 2011.

If you have any questions concerning this, please contact Bernadine Lawlor, Geologist, Exploration Approval and Land Use, at 729-6408.

Regards,


L Kenneth C.M. Andrews, P. Geo.
Director, Mineral Lands Division

c: Jim Hinckley, Manager of Mineral Rights
Kathleen Simms, DFO
Charles Maclean, Environment Canada
Kirsten Miller, Wildlife Division
Ken Russell, Government Service Center
Martha Drake, Cultural Heritage Division
Paula Reid, Innu Nation
Michelle Watkins, Labrador Affairs
Mark Bugden, Aboriginal Affairs

Chuck Porter, Forestry



Legend

- Inferred Drillholes 2011
- Mineral License
- Proposed Sample Site
- contours
- roads

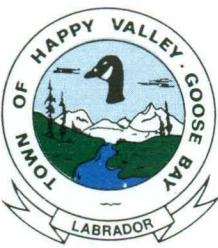


**Proposed Muskrat Falls
Sample Location Map**
Produced by: G.J. DeMont
September 2011
Scale 1:10,000
NAD 83

GRAND RIVER IRONSANDS
Muskrat Falls Sampling Program

APPENDIX B

COMMUNITY LETTERS OF SUPPORT



Town of Happy Valley-Goose Bay

P.O. Box 40 Station B • Happy Valley-Goose Bay, Newfoundland • AOP 1E0 • 709-896-3321 • Fax: 709-896-9454

September 30, 2011

Mr. Ken Andrews, Director
Mineral Resources Building
P.O. Box 8700
St. John's, NL A1B 4J6

Dear Mr. Andrews,

Kindly accept this letter as the provincial agency that coordinates applications for Mineral Exploration Permits and on behalf of all departments, agencies and authorities involved in the process including the Town of Happy Valley-Goose Bay. We fully understand the significance of the process and the need to ensure all critical matters are properly addressed.

We write to express our knowledge of the efforts of Grand River Ironsands Incorporated (GRI) in exploring the minerals sands near our community. We are encouraged that this project is committed to working with mineral sands, which have already been processed to a major extent by nature, and their willingness to work with advancing local economic development undertakings over a longer period. They have responsibly kept us informed and have worked diligently to support working with local people and companies. Their efforts are of interest to our economic development needs and we have spent considerable time and energy in working with them.

In general:

- We are aware of the Company, its activities to date, and general support for the project and in particular GRI's interest in developing secondary processing within the Municipal boundaries if possible.
- Understand the importance of the next step in the Project which is the need to collect a 7,000 tonne sand sample that will be trucked to a facility within the community (industrial zone), whereby iron ore will be separated (through gravity and magnets) and shipped out for further processing in the melt test. The remaining sand will be returned to the sample location on the back haul. Any potential issues such as the temporary increased haul traffic and workers at the local facility will be addressed through ongoing discussions between Town staff and GRI.
- The Town will also have its staff monitoring activities within its boundaries to ensure compliance with Municipal standards.

- The Town of Happy Valley-Goose Bay hereby expresses support for this Project and particularly for the expeditious completion of this step in the development of this industry.

We obviously respect the outcome of proper process for the permit and respectfully ask that all involved give their best efforts to find a solution in a timely manner.

Thank you for your consideration.

Sincerely yours,



Leo Abbass
Mayor



LABRADOR NORTH CHAMBER OF COMMERCE

P.O. Box 460, Station B | 169 Hamilton River Road | Happy Valley-Goose Bay, NL | A0P 1E0
Tel: (709) 896-8787 | Fax: (709) 896-8039 | Email: admin@chamberlabrador.com | Web: www.chamberlabrador.com

October 4, 2011

Mr. Ken Andrews
Director, Department of Natural Resources
Government of Newfoundland and Labrador
Mineral Resources Building
P.O. Box 8700
St. John's, NL A1B 4J6

Dear Mr. Andrews,

Please accept this letter as support from the Labrador North Chamber of Commerce (LNCC) with respect to the Grand River Ironsands Inc. (GRI) project located in Central Labrador. Furthermore, we ask that urgency be given to the permitting process, in an effort to advance this project toward possible development.

While we understand the significance and are supportive of the permitting process, the Central Labrador business community believes this to be an important economic development initiative for the region. Through this project, many opportunities exist for regional goods and services procurement, as well as employment of local individuals. The LNCC has spent significant time working with GRI to promote development of the Churchill River iron-sands, and are confident this will be a positive initiative for Newfoundland and Labrador if moved forward in a timely manner.

Thank you in advance for your prompt attention to this matter. Contact the LNCC office if you have any questions or concerns.

Sincerely,

Sterling Peyton
President

Explore the Opportunity

