

CHAPTER 2 – PROJECT DESCRIPTION

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2. PROJECT DESCRIPTIONS

2.1 Project Overview

The Minago Property is located in Manitoba's Thompson Nickel belt, approximately 225 km south of Thompson, Manitoba, Canada (Figure 2.1-1).

In 2006, Nuinsco Resources Ltd. (Nuinsco) retained Wardrop Engineering Inc. (Wardrop) to provide the Preliminary Economic Assessment (PEA) of the Property. The PEA was completed in accordance with the National Instrument 43-101 (NI 43-101) requirements to identify the resources within economic open pit and underground mine designs.

At the time the PEA was issued, Nuinsco owned 100% of the mining lease on the Property. In 2007, ownership of the Property was transferred to Victory Nickel Inc. (Victory Nickel), at that time, a wholly owned subsidiary of Nuinsco. On April 24, 2007, Victory Nickel engaged Wardrop to prepare the Minago Feasibility Study and a NI 43-101 compliant report. For this work, the resource estimation was provided by Wardrop in accordance with the Canadian Institute of Mining, Metallurgy, and Petroleum (CIM) Mineral Resource and Mineral Reserves definitions.

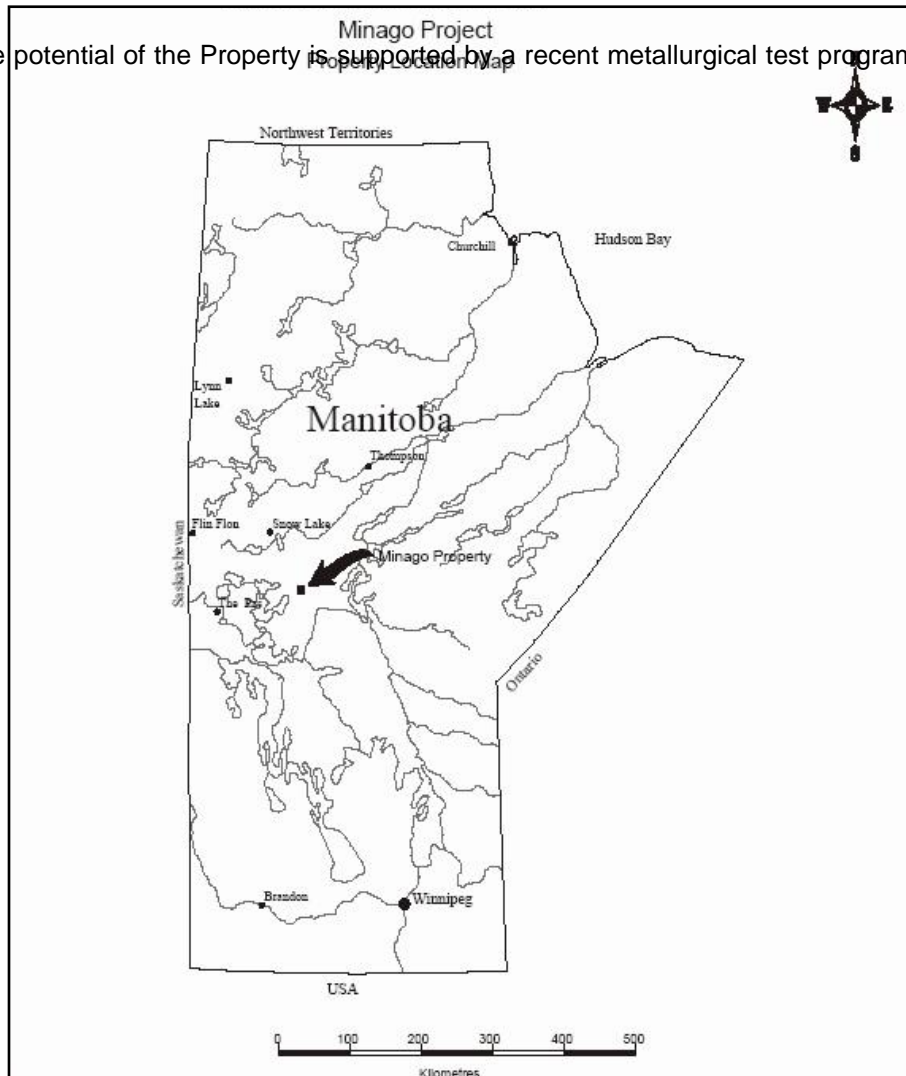
Wardrop found that the Minago deposit has potential as a large tonnage, low-grade nickel sulphide deposit amenable for open pit, and possibility for underground bulk tonnage mining methods. Significant parts of the deposit below a depth of 400 m require additional drilling to upgrade the resource class from inferred to indicated (Wardrop, 2009b).

Wardrop estimates that the Minago deposit contains a measured resource of 9.1 Mt grading 0.47% NiS above a cutoff grade of 0.2% NiS. In addition, the deposit contains 35 Mt of indicated resource at 0.42% NiS above a 0.2% NiS cutoff grade. An inferred resource of 12 Mt at 0.44% NiS above a 0.2% NiS has also been estimated (Wardrop, 2009b). The potential of the Minago Property is further supported by metallurgical testing in which very high grade concentrate was produced.

Wardrop also identified a sandstone horizon averaging ten metres thick above the unconformity of the main nickel bearing serpentinite. These well rounded silica sand particles in the sandstone formation were identified as being suitable for use as hydraulic fracturing sand, or "frac sand". When used as proppants in oil or gas wells these sands will improve the porosity of the shale beds leading to improved recovery and enhanced production. Currently, in onshore US wells, approximately 50% of the gas wells and 30% of the oil wells are hydraulically fractionated (Wardrop, 2009b).

The deposit has potential as a large tonnage, low-grade nickel sulphide deposit (25.2 Mt at 0.43% nickel (Ni), 0.20% cut-off grade) and contains 14.8 Mt million tonnes of marketable frac

sand. The potential of the Property is supported by a recent metallurgical test program, where a very high



Source: Wardrop, 2006

Figure 2.1-1 Property Location Map

grade nickel concentrate was produced. The excellent recoveries for the ore from the open pit mine are substantiated by historical and current metallurgical testing data.

Together with the limestone-dolomite, the sandstone layer must be removed to access the nickel mineralization within the proposed open pit mine. To capture the value of this sand, Victory Nickel instructed Wardrop to include an assessment of frac sand within the Minago Feasibility

Study. As a result of this additional work, the economic viability of commercial frac sand production has been established (Wardrop, 2009b).

The Property has a favourable location adjacent to the paved provincial Highway 6, which traverses north to Thompson. A 230 kV Manitoba Hydro power line runs parallel to the highway. The Property is only 60 km from the Omnitrax Canada railway line, which extends from Flin Flon and The Pas to Churchill. Grand Rapids is the closest township, located approximately 100 km south of the Property.

The mine life is estimated to be seven and two partial years, with frac sand being produced throughout the life of the mine and beyond. Frac sand will be processed for a period of ten years. Accommodation facilities and other associated facilities will be provided for the majority of the workforce, who will manage, operate, and maintain the mine on a rotational basis. To the extent possible, the workforce will be comprised of members of the local First Nations community.

As currently configured, the proposed project will be comprised of an open pit mine, an Ore Concentrating Plant, a Frac Sand Plant, and supporting infrastructure (Figure 2.1-2). The Ore Concentrating Plant will process 3,600,000 t/a of ore through crushing, grinding, flotation, and gravity operations. This feed rate will produce approximately 49,500 t/a of 22.3% nickel concentrate on an average year before transportation losses and approximately 46,400 t/a after losses. The Frac Sand Processing Plant will be capable of producing between 1,500,000 t/a of various sand products including 20/40 and 40/70 frac sand, glass sand, and foundry sand products.

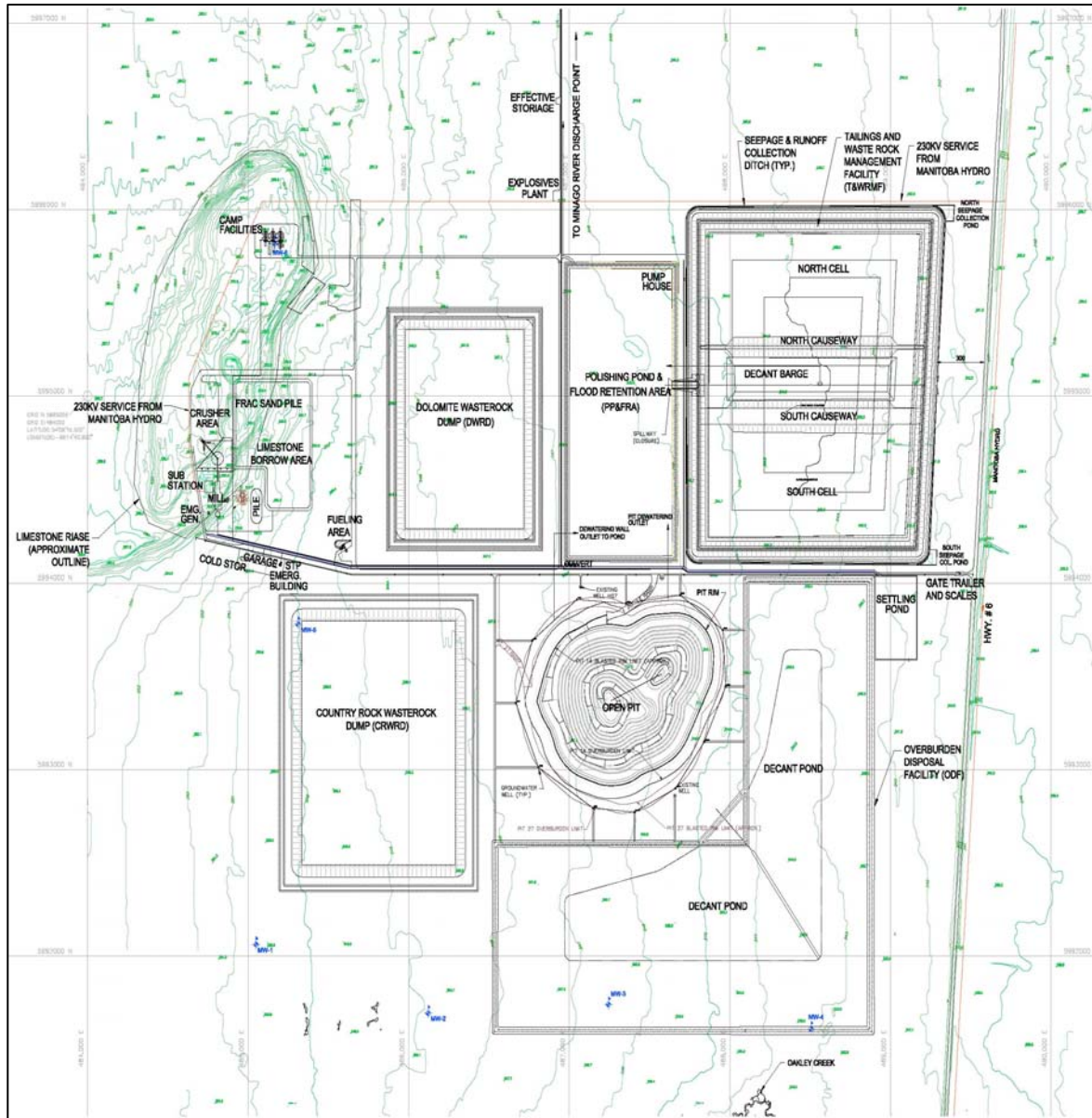
The mine site is situated within a topographically low area of water-saturated peat and forest terrain. The area is almost entirely swampy muskeg with vegetation consisting of sparse black spruce and tamarack set in a topographic relief of less than 3 m. Although this low area extends for significant distances to the north and east, elevated limestone outcrops exist to the south and west at a distance of 7 to 20 km from the site.

The site is located within the Nelson River sub-basin, which drains northeast into the southern end of the Hudson Bay. The basin has two more catchments, the Minago River and the Hargrave River, which enclose the project site to the north. There are two more tributaries, the William River and the Oakley Creek present at the periphery of the project area. The catchments of these two tributaries are within the Lake Winnipeg basin and drain northward into the Nelson River sub-basin.

The supporting infrastructure will include:

- a Tailings and Ultramafic Management Facility (TWRMF), rock dumps, and overburden dumps with supporting facilities;
- an Explosives Plant and explosives storage;

- a Potable Water Treatment Plant;
- local flood collection ponds and flood retention area with associated pumping systems;



Source: adapted from Wardrop, 2009b

Figure 2.1-2 General Site Plan of Minago

- de-watering systems with associated pipelines and pumping stations;
- roads and laydown areas;
- staff accommodations and facilities;
- open pit mining equipment including trucks, shovels, loaders, and drills; and
- truck repair and maintenance facilities.

The plant and infrastructure facilities have been located as close to the open pit mine as possible, based on a geotechnical investigation that identified the closest location with the best foundation conditions for the heavy equipment.

The plant and infrastructure facilities, shown in Figure 2.1-2, have been located as close to the open pit mine as possible on the limestone bluff to the west of the site. The escarpment will be cut back to a general elevation of 254 m.a.s.l. to ensure clearance above the water table for the plant facilities. The crusher will be located on the limestone bluff at a position where the elevation grade is most favourable. A more detailed sketch showing the plant and the camp facilities is given in Figure 2.1-3.

The Tailings and Waste Rock Management Facility (TWRMF) has been located on the east side of the side of the property where the geotechnical investigation has identified the best foundation conditions. At this location, to the northeast of the mine, the limestone founding strata was found to be between 3 to 4 m below the surface. Typically, on the balance of the site within close proximity of the open pit mine, the limestone horizon is 10 to 12 m below the surface.

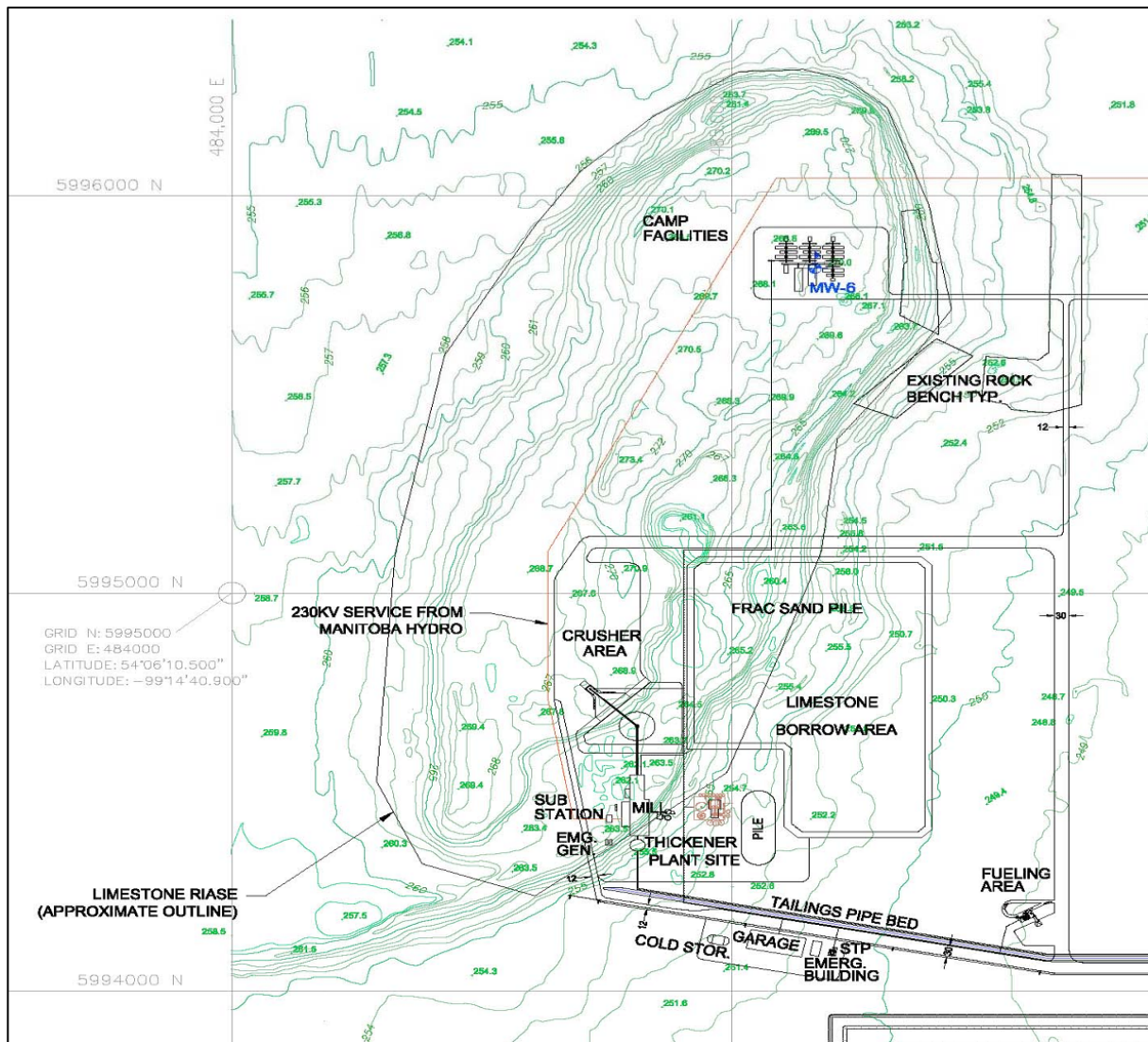
The dumps for country rock, waste dolomite and the overburden were located around the pit to minimize the haul distances from the pit.

The road network was determined by the location of the dumps, facilities, and the ring road around the open pit mine, which will be used to access the de-watering wells. An access and maintenance road to service the discharge line to the Minago River was positioned in relation to the flood retention area and the associated pump houses. A similar discharge line will feed into a small tributary of the Oakley Creek.

2.1.1 Project Purpose and Need

At present, the world demand for nickel is exceeding the available supply. North America is not self sufficient in its nickel production. China and India have become the world's largest consumers of Nickel. The demand for nickel in China will continue to grow as the World's economies continue to improve. This suggests strong continued growth in nickel consumption. The long- term picture for nickel production shows no relief in sight for the current market trend. The increasing demand for nickel will continue to outpace the forecasted increases in production.

The timing for the development of a nickel mine producing high grade nickel concentrate is excellent.



Source: Wardrop, 2009b

Figure 2.1-3 Plant and Camp Facilities

The market for nickel concentrates is strong, bringing favourable purchase terms and providing long-term security to project economics. Victory Nickel Inc. (VNI) intends to take advantage of this excellent market opportunity and the exceptional ore resource of the Minago Project to create profits for its shareholders. The Minago Project will provide a much-needed boost to the Manitoba economy, an economy that has experienced a serious downturn due to the current economic recession. The project will provide a solid tax base, support for infrastructure development, and workforce development opportunities for local communities.

2.1.2 Project Timing

The mine life is estimated to be seven full years and two partial years, with concentrate production mirroring ore production. The frac sand, which is to be mined at the start of mining will be produced throughout the life of the mine and beyond. The first partial year's ore production (2013) will be stockpiled pending commissioning of the Ore Processing Plant in 2014.

The construction phase is scheduled to commence with the overburden removal together with the open pit dewatering systems in the spring of 2011 (Year -3). Electrical supply installations are required to be in place before the spring of 2011 to provide power for the pit dewatering and dredging programs.

Construction can commence once all the permits are obtained from the MB Government. Victory Nickel anticipates to get the Environmental Act License approvals for mining and mill construction by August, 2010. Commencement of milling operations will commence in Year 2012 (Year -2) and into Year 2013 (Year -1). This is contingent upon receipt of the required licenses from the MB Government. Frac sand production will start in Year 2013 (Year -1) and Nickel production will start in 2014 (Year 1).

2.1.3 Overview of Project Components, Design Criteria and General Layout

The overall layout for the Minago Project is presented in Figure 2.1-2. The project has and will continue to be designed according to the following general criteria:

- The project must meet or exceed the highest standards of industrial health and safety and demonstrate minimum environmental impact. Existing industry guidelines, codes of practice, standards and regulations will be consulted and the most stringent will be applied.
- The project will mine and process 10,000 t/d of run of mine ore, including variable amounts of external dilution. In addition, the facility will produce frac sand.
- The project will be designed to operate continuously, 365 days per year with appropriate design allowances in each department for planned maintenance shut downs.
- Tailings and ultramafic waste rock will be co-disposed of in the Tailings and Waste Rock Management Facility to control potential for Acid Rock Drainage (ARD) and Metal Leaching (ML).
- The mining method will be drill and blast, and use electrical and diesel powered equipment. The mining method must be very adaptable, safe, and conserve the resource by achieving high performance standards.
- The process plant will use flotation methods to produce one nickel concentrate to agreed quality specifications. The concentrates will be sold to external smelters for processing to metal. The project will not produce marketable metal as there will be no smelter.

- Employees will be drawn from local communities and provided with hotel style accommodation at the mine camp.
- A nucleus of skilled experienced workers will be recruited for initial development and construction. Through local recruiting and comprehensive training, the company has set the goal of maximizing the percentage of Manitoba residents, and the Communities of Interest (COI) in particular.

When completed, the Minago project production facilities will consist of a 10000 t/d Open pit, flotation concentrator, process water treatment plant, waste rock dumps, and a subaqueous tailings and waste rock management facility. These production facilities will be supported by the following infrastructure: a maintenance workshop, warehouse, electric power supply, fuel and propane tank farm, offices, sanitary and changing facilities (dry), camp, water supply system, sewage plant, domestic and industrial waste disposal and transportation corridors.

2.2 Certificate of Title and Mineral Depositions

2.2.1 Mineral Rights

2.2.2 Mineral Depositions

The Property is comprised of one contiguous group of claims and one mineral lease, augmented by an isolated claim and a second adjacent mineral lease (Figures 2.2-1 and 2.2-2). The contiguous block consists of one mineral lease and 40 unpatented mineral claims with a combined surface area of 7,298.23 hectares (ha) (Tables 2.2-1 and 2.2-2).

Mineral Lease 2 and Mineral Lease 3, which were issued on April 1, 1992, for a period of 21 years and may be renewed after that time at the discretion of the Minister of Manitoba Industry, Economic Development, and Mines. The annual rental cost of the mineral leases is \$1,984 for Mineral Lease 2 and \$1,416 for Mineral Lease 3, both due annually on April 1.

Mineral claims KON 1 through KON 4 are in good standing until May 17, 2021 plus 60 days. Thereafter the cost to keep the KON mineral claims in good standing is \$25.00/ha per year in the form of work conducted and submitted for assessment or payment in lieu thereof.

Mineral claims BARNEY 1 to BARNEY 6 inclusive are in good standing until September 24, 2022 plus 60 days. After that, the costs to keep the BARNEY claims in good standing is \$25.00/ha per year in the form or work conducted and submitted for assessment or payment in lieu thereof.

The mineral claims MIN 1 through MIN 29 are in good standing until the dates indicated on Table 2.2-1. The earliest expiry date for this claim group is January 26, 2009. After expiry, the cost to keep the MIN claims in good standing is \$12.50/ha per year until the year 2017 in the form of

work conducted and submitted for assessment or payment in lieu thereof. Thereafter the cost to keep

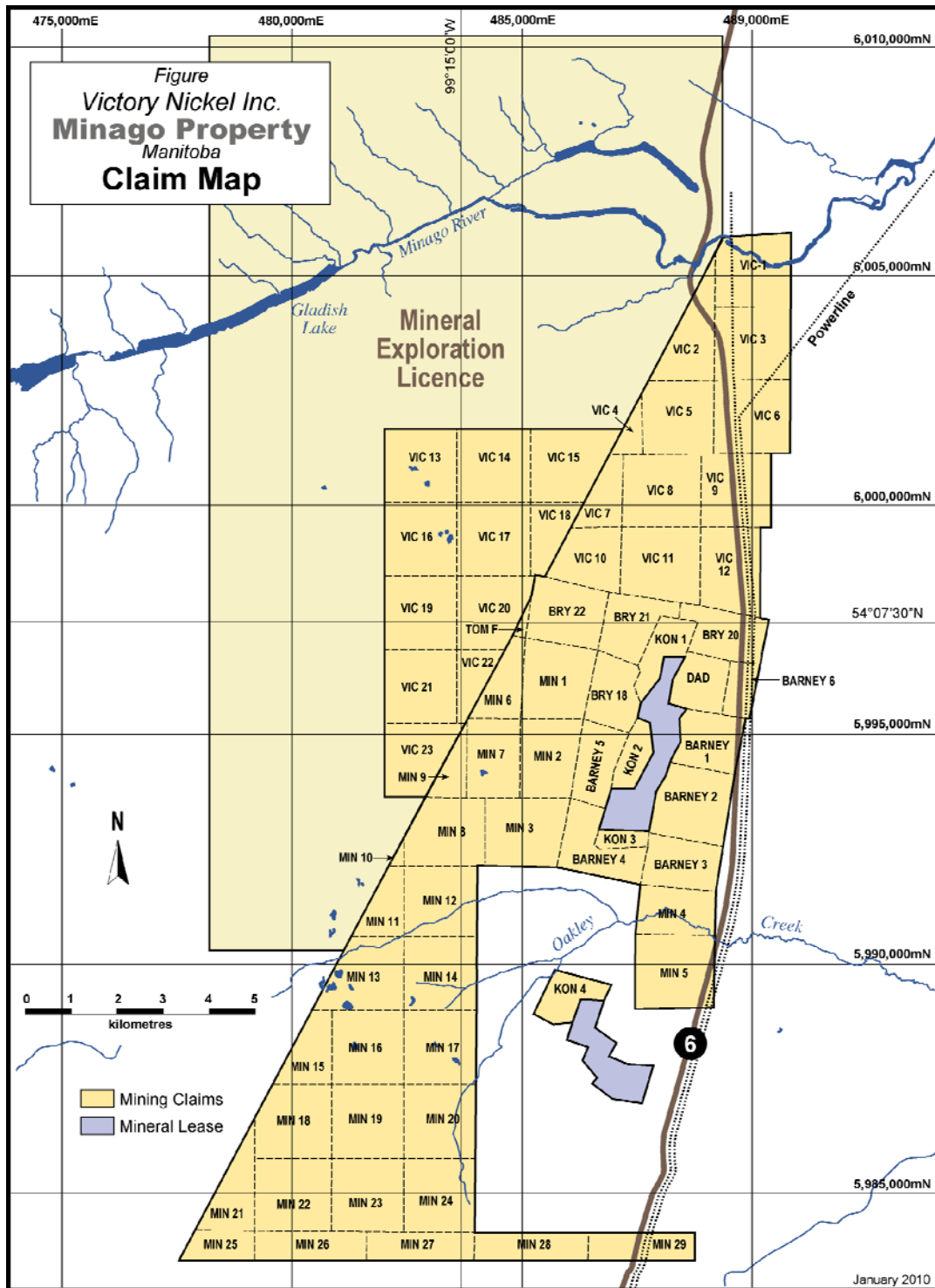
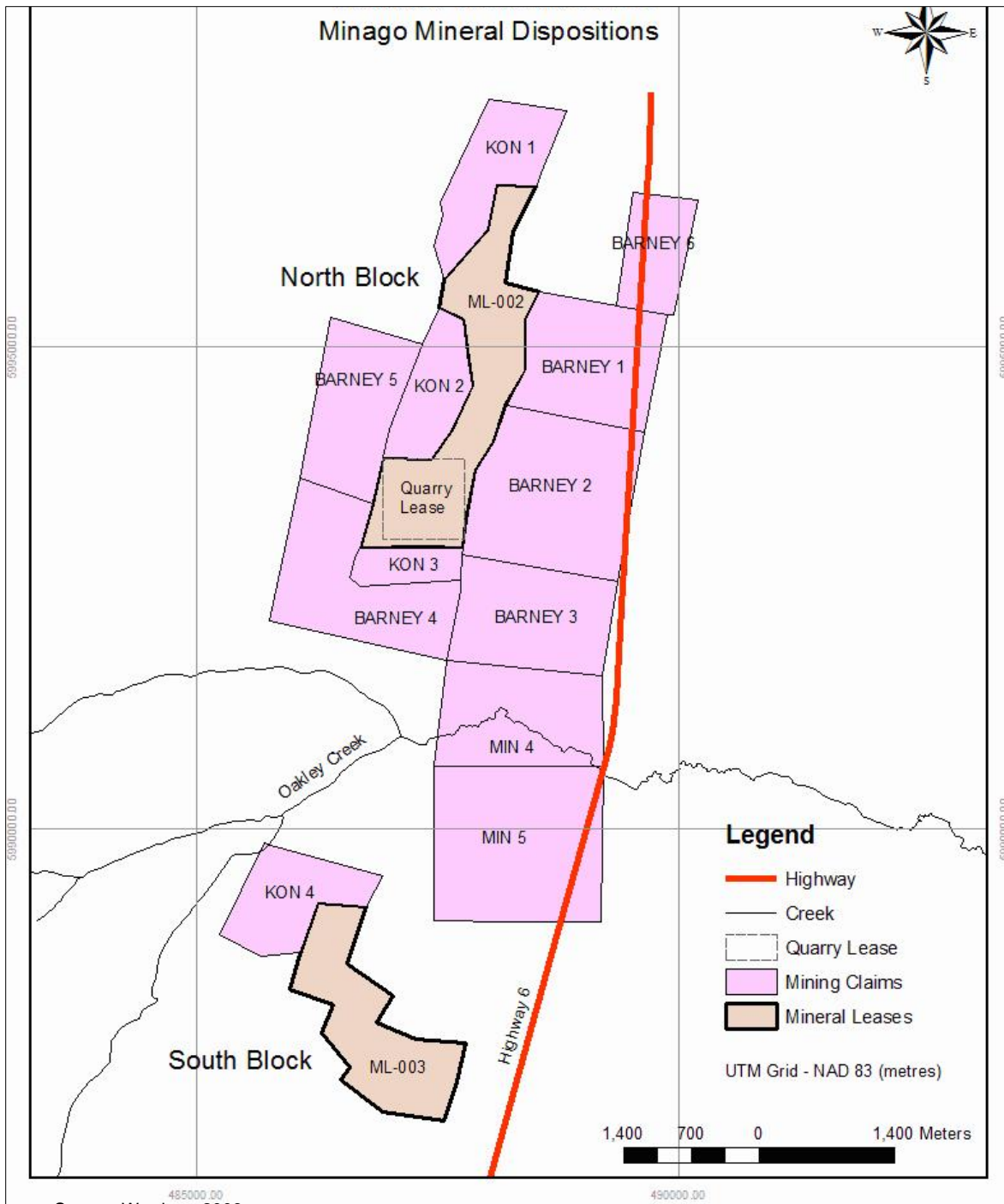


Figure 2.2-1 Minago Mineral Dispositions



Source: Wardrop, 2006

Figure 2.2-2 Minago's Historical Mineral Dispositions

Table 2.2-1 Minago Claim Group

Claim Name	Claim Number	Claim Holder	Date Staked	Date Recorded	Expiry Date	Area (ha)
KON 1	P2527F	Victory Nickel Inc.	1994/03/08 16:30	18/03/1994	17/05/2021	108
KON 3	P2529F	Victory Nickel Inc.	1994/03/10 16:05	18/03/1994	17/05/2021	43
KON 2	P2528F	Victory Nickel Inc.	1994/03/11 11:50	18/03/1994	17/05/2021	73
KON 4	P2530F	Victory Nickel Inc.	1994/03/13 11:00	18/03/1994	17/05/2021	105
BARNEY 1	MB5390	Victory Nickel Inc.	2004/07/04 15:45	26/07/2004	24/09/2022	168
BARNEY 2	MB5391	Victory Nickel Inc.	2004/07/05 16:00	26/07/2004	24/09/2022	242
BARNEY 3	MB5392	Victory Nickel Inc.	2004/07/06 16:00	26/07/2004	24/09/2022	170
BARNEY 4	MB5393	Victory Nickel Inc.	2004/07/07 16:15	26/07/2004	24/09/2022	184
BARNEY 5	MB5394	Victory Nickel Inc.	2004/07/08 15:45	26/07/2004	24/09/2022	155
BARNEY 6	MB5395	Victory Nickel Inc.	2004/07/17 13:30	26/07/2004	24/09/2022	76
MIN 1	MB7027	Victory Nickel Inc.	2006/11/06 19:20	27/11/2006	26/01/2009	235
MIN 2	MB7028	Victory Nickel Inc.	2006/11/07 19:30	27/11/2006	26/01/2009	214
MIN 3	MB7029	Victory Nickel Inc.	2006/11/08 18:30	27/11/2006	26/01/2009	252
MIN 4	W48594	Victory Nickel Inc.	2006/07/27 19:00	04/08/2006	03/10/2009	162
MIN 5	W48595	Victory Nickel Inc.	2006/07/27 19:30	04/08/2006	03/10/2009	256
MIN 6	MB7030	Victory Nickel Inc.	2006/11/06 19:05	27/11/2006	26/01/2009	135
MIN 7	MB7031	Victory Nickel Inc.	2006/11/07 19:15	27/11/2006	26/01/2009	204
MIN 8	MB7033	Victory Nickel Inc.	2006/11/10 18:20	27/11/2006	26/01/2009	205
MIN 9	MB7032	Victory Nickel Inc.	2006/11/10 16:00	27/11/2006	26/01/2009	78
MIN 10	MB7066	Victory Nickel Inc.	2007/01/09 14:20	23/01/2007	24/03/2009	57
MIN 11	MB7067	Victory Nickel Inc.	2007/01/09 13:40	23/01/2007	24/03/2009	121
MIN 12	MB7141	Victory Nickel Inc.	2007/01/10 15:22	23/01/2007	24/03/2009	250
MIN 13	MB7142	Victory Nickel Inc.	2007/01/11 16:51	23/01/2007	24/03/2009	256
MIN 14	MB7143	Victory Nickel Inc.	2007/01/10 16:51	23/01/2007	24/03/2009	256
MIN 15	MB7144	Victory Nickel Inc.	2007/01/12 14:37	23/01/2007	24/03/2009	138
MIN 16	MB7145	Victory Nickel Inc.	2007/01/12 16:0	23/01/2007	24/03/2009	256
MIN 17	MB7146	Victory Nickel Inc.	2007/01/11 15:1	23/01/2007	24/03/2009	247
MIN 18	MB7147	Victory Nickel Inc.	2007/01/13 16:0	23/01/2007	24/03/2009	247
MIN 19	MB7148	Victory Nickel Inc.	2007/01/14 16:0	23/01/2007	24/03/2009	256
MIN 20	MB7149	Victory Nickel Inc.	2007/01/13 15:2	23/01/2007	24/03/2009	243
MIN 21	MB7150	Victory Nickel Inc.	2007/01/15 13:4	23/01/2007	24/03/2009	181
MIN 22	MB7151	Victory Nickel Inc.	2007/01/14 16:1	23/01/2007	24/03/2009	256
MIN 23	MB7152	Victory Nickel Inc.	2007/01/15 15:4	23/01/2007	24/03/2009	256
MIN 24	MB7153	Victory Nickel Inc.	2007/01/08 16:2	23/01/2007	24/03/2009	241
MIN 25	MB7154	Victory Nickel Inc.	2007/01/16 13:0	23/01/2007	24/03/2009	88
MIN 26	MB7155	Victory Nickel Inc.	2007/01/16 15:4	23/01/2007	24/03/2009	145
MIN 27	MB7156	Victory Nickel Inc.	2007/01/07 16:2	23/01/2007	24/03/2009	145
MIN 28	MB7157	Victory Nickel Inc.	2007/01/08 15:4	23/01/2007	24/03/2009	153
MIN 29	MB7158	Victory Nickel Inc.	2007/01/07 15:51	23/01/2007	24/03/2009	153
TOM F	MB8549	Victory Nickel Inc.	2008/04/16 15:40	12/05/2008	11/07/2010	14
DAD	MB8497	Victory Nickel Inc.	2008/05/22 16:00	28/05/2008	27/07/2010	132
Total						7156

Table 2.2-2 Minago Mineral Leases

Lease Name	Lease Number	Lease Holder	Expiry Date	Area (ha)
Mineral Lease 2	ML-002	Victory Nickel Inc.	01/04/2013	247.2
Mineral Lease 3	ML-003	Victory Nickel Inc.	01/04/2013	176.9

the MIN mineral claims in good standing is \$25.00/ha per year in the form of work conducted and submitted for assessment or payment in lieu thereof.

Mineral claims VIC 1 through VIC 12 are in good standing until April 17, 2021 plus 60 days. Thereafter the cost to keep the KON mineral claims in good standing is \$12.00/ha per year in the form of work conducted and submitted for assessment or payment in lieu thereof.

Mineral claims VIC 13 through VIC 23 are in good standing until December 21 2011 plus 60 days. Thereafter the cost to keep the KON mineral claims in good standing is \$12.00/ha per year in the form of work conducted and submitted for assessment or payment in lieu of.

As a result of an option agreement entered into with Xstrata Nickel on claims BRY 18, BRY 20, BRY 21, BRY 22, TOM F, and DAD and subsequently fully exercised at year- end 2008, a NSR is payable to Xstrata on any exploited mineralization found on the claims. The NSR consists of a 2% royalty when the London Metal Exchange (LME) three-month nickel price is greater than, or equal to, US\$13,227.74/t, and a 1% NSR when the three-month price of nickel is less than US\$13,227.74/t. All other metals will be subject to a 2% NSR.

Victory Nickel has obtained a quarry lease (QL-1853) with an area of 69.88 ha on a portion of the mineral lease ML-002. In addition, four quarry leases, surrounding and contiguous with QL-1853 have been applied for. These pending quarry leases over a total area of an additional 244 ha. Victory Nickel has also been issued the 10-year quarry lease QL-2067 that commenced in November 2009 (Figure 2.2-3).

Quarry lease QL-1853 has a term of 10 years and may be renewable for further terms of 10 years subject to the discretion of the Minister. The annual rental cost for the quarry lease is \$1,677.12 payable on the anniversary date. The annual rental cost for QL-2067 is \$1,680.00. A copy of lease QL-2067 is provided in Appendix 2.2.

Victory Nickel has made the initial payment of \$150,000 and incurred expenditures of at least \$500,000 on the claims prior to September 30, 2008. Payment of the remaining outstanding 'cash in lieu' is on the books of Manitoba Science, Technology, Energy, and Mines. The NSR consists of a 2% royalty, payable to Xstrata, when the London Metal Exchange (LME) three-month nickel price is greater than, or equal to, US\$13,227.74/t, and a 1% NSR when the three-month price of nickel is less than US\$13,227.74/t. All other metals will be subject to a 2% NSR.

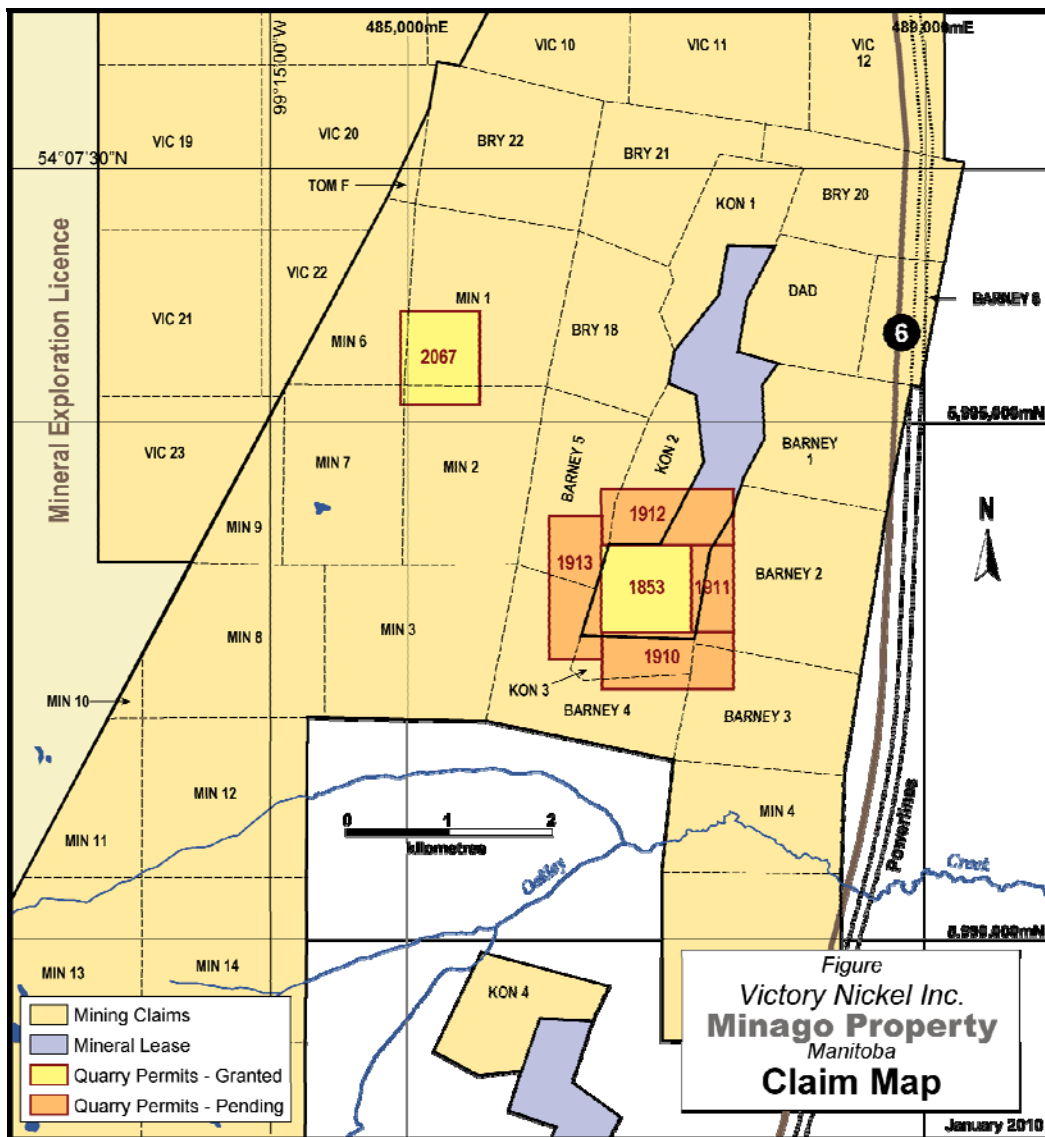


Figure 2.2-3 Minago Property Quarry Lease Status

2.2.3 Ownership

Victory Nickel has 100% ownership of the Minago Project and also the Mines and Minerals Act entitles mineral claims owners the rights as given below:

The holder (Victory Nickel) of a mineral claim has the exclusive right to explore for and develop the Crown minerals, other than the quarry minerals, found in place on, in, or under the lands covered by the claim (The Mines and Minerals Act, 73[1]).

The lessee (Victory Nickel) of a mineral lease has the exclusive right to the Crown minerals, other than quarry minerals, that are the property of the Crown and are found in place or under the land covered by the mineral lease. The lessee also has access rights to open and work a shaft or mine, and to erect buildings or structures upon the subject land (The Mines and Minerals Act, 108[a], [b], [i], [ii]).

With respect to the pending quarry lease, the lessee of a quarry lease has the exclusive right to the Crown quarry minerals specified in the lease (in this case limestone) that are found on or under the land covered by the lease and that are the property of the Crown (The Mines and Minerals Act, 140[1] [a]).

There are no instruments registered with the Mining Recorder at Manitoba Energy, Mines, Science and Technology Ministry on any of the mineral dispositions with respect to liens, judgments, debentures, royalties, back-in rights or other agreements.

2.2.3.1 Encumbrances

Encumbrances on the mineral dispositions include:

- For Norway House District: Registered Trap Line (RTL) # 150-07 covering all mineral dispositions.
- For Forestry Branch, Forest Management Licence: (FORM REPAP W 0012 and FORM REPAP 2 0012 covering all mineral dispositions.
- For Manitoba Hydro, Transmission Line and Easement Agreement: Right of Way 319.735 m wide, plan number 5830 N.L.T.O for portions of BARNEY 1, BARNEY 2, BARNEY 6, and MIN 5.
- For Manitoba Department of Highways: Right of way 91.44 m wide that is split 65.532 m west of the centre line and 25.908 east of the centre line, plan number 6149 N.L.T.O for portions of BARNEY 1, BARNEY 2, BARNEY 3, BARNEY 6, MIN 4, and MIN 5.
- For Manitoba Department of Highways: Quarry Withdrawal, plan number 6148 N.L.T.O for southeast corner of ML-003.

With respect to the pending quarry lease, royalties are applicable to quarry products such as limestone and frac sand at varying rates depending on their end use. Currently, a rehabilitation levy of \$0.10/t will not apply to quarry production.

There is no mining-related infrastructure on the Property although the Minago River Nickel Deposit, previously referred to as the Nose Deposit, is located on mineral lease ML 002.

There are no environmental liabilities attached to the Property.

2.2.4 Tenure Rights

The holder of a mineral claim has the exclusive right to explore for and develop the Crown minerals, other than the quarry minerals, found in place on, in, or under the lands covered by the claim (The Mines and Minerals Act, 73[1]).

The lessee of a mineral lease has the exclusive right to the Crown minerals, other than quarry minerals, that are the property of the Crown and are found in place or under the land covered by the mineral lease. The lessee also has access rights to open and work a shaft or mine, and to erect buildings or structures upon the subject land (The Mines and Minerals Act, 108[a], [b], [i], [ii]).

The lessee of a quarry lease has the exclusive right to the Crown quarry minerals specified in the lease (in this case limestone) that are found on or under the land covered by the lease and that are the property of the Crown [The Mines and Minerals Act, 140 (1) (a)].

2.2.5 Option Agreement with Xstrata Nickel

As a result of an option agreement entered into with Xstrata Nickel on claims BRY 18, BRY 20, BRY 21, BRY 22, TOM F, and DAD and subsequently fully exercised at year-end 2008, a NSR is payable to Xstrata on any exploited mineralization found on the claims. The NSR, consists of a 2% royalty when the London Metal Exchange (LME) three-month nickel price is greater than, or equal to, US\$13,227.74/t, and a 1% NSR when the three-month price of nickel is less than US\$13,227.74/t. All other metals will be subject to a 2% NSR.

2.3 Existing Land Use

The project is located in the Norway House Resource Management Area. In addition, there is a Registered Trap Line (RTL) # 150-07 covering all mineral dispositions.

Resource Management Areas have been established by the Manitoba government. The RMA, in which the project area is located, is currently an inactive area so there are no current land use plans developed for the project area.

2.4 Minago Project – Economic Assessment

2.4.1 Feasibility Study

In 2007, Victory Nickel retained Wardrop to undertake a Feasibility Study of the Minago Project following positive results of the Scoping Study completed in 2006. The Feasibility Study was completed in the first quarter of 2010. The results of the Feasibility Study are discussed below.

The deposit has potential as a large tonnage, low-grade nickel sulphide deposit (25.2 Mt at 0.43% nickel (Ni), 0.20% cut-off grade) and contains 14.8 Mt million tons of marketable frac sand. The potential of the Property is supported by a recent metallurgical test program, where a very high grade nickel concentrate was produced. The excellent recoveries for the ore from the open pit mine are substantiated by historical and current metallurgical testing data.

The economic aspects of a deposit would be constrained by some 80 m of overburden, limestone, and sand resulting in a high open pit strip ratio. However, in the case of the Minago Project, the 10 m sand layer just above the ultramafic ore bearing rock contains marketable frac sand, which offsets the cost of the stripping.

In addition to the Nickel Ore Concentrating Plant, the installation of a Frac Sand Processing Plant will generate further revenues for the project. The financial analysis assumes that critical revenue streams will be developed from both the nickel and frac sand resources. Table 2.4-1 shows the proposed production schedule by year, for the waste, the nickel ore and the sand.

Table 2.4-1 Production Schedule by Year and Product

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
Dolomite (kt)	42,655	43,179	15,183	1,0015	0	0	0	0	0	0	111,032
Granite (kt)	0	1,744	20,890	20,440	35711	24459	9,784	4,944	3,832	199	122,005
Ultramafic (kt)	0	861	7,941	5,524	5,667	5,732	4,382	3,026	2,297	229	35,659
Sand (kt)	0	5,289	2,092	7,466	0	0	0	0	0	0	14,847
Total Ore (kt)	0	112	3,000	3,600	3,600	3,600	3,600	3,600	3,600	453	25,166
% Ni(S), Grade Ore	0.000	0.374	0.419	0.429	0.430	0.413	0.436	0.431	0.447	0.468	0.430
Total Tonnage (kt)	42,655	51,186	49,105	47,045	44,979	33,792	17,766	11,570	9,728	881	

During the development of the Feasibility Study, certain concepts were pursued in the interests of cost and efficiency. In place of the mechanical removal of the overburden, Wardrop has selected a dredging option to reduce costs significantly and create more favorable spoil areas. By co-depositing the potentially acid generating, metal leaching ultramafic rock and sealing these within the tailings, significant infrastructure and legacy costs are eliminated. Finally, by shortening the production life of the Frac Sand Plant to match that of the Ore Processing Plant, general and administrative and surface facility costs will be minimized.

The mine life is estimated to be seven full years and two partial years, with concentrate production mirroring ore production. The frac sand which is to be mined at the start of mining is produced throughout the life of the mine and beyond. The first partial year's ore production (2013) will be stockpiled pending commissioning of the Ore Processing Plant in 2014.

The Project features an open pit bulk tonnage mining method, a 3.6 Mt/a Nickel Ore Processing Plant, and a 1.5 Mt/a Sand Processing Plant producing various sand products, including 20/40

and 40/70 frac sand, and other finer sized sands. The Project will be built over a three year period at a capital cost of \$596.3 million. The Nickel Ore Processing Plant is scheduled to come online in the spring of 2014 and the Frac Sand Plant is scheduled to come online in the spring of 2013.

The work undertaken for the Feasibility Study and Environmental Baseline Studies form the basis of the EIS. A copy of the Feasibility Study for the Minago Project can be obtained at www.sedar.com.

2.4.2 2006 Scoping Study (Wardrop, 2006)

In 2006, VNI retained Wardrop to provide a preliminary economic assessment of the Minago property. Their engineering and financial analysis was done using NI 43-101 compliant resources within economic pit shells and underground designs. The resource estimates were completed by P.J. Chornoby with assistance from Mirarco and all remaining assessments of the property were done by Wardrop.

P. J. Chornoby, P. Geo conducted an independent review of the geology, exploration history, historical resource estimates, resource estimates, and the potential for discovery of additional nickel mineralization of the Minago property in central Manitoba. This independent review summarizes the results of exploration conducted during the period from 1966 to 1991 and work conducted by Nuinsco from 2004 to October 31, 2006. An independent report was deemed necessary for material disclosure of new diamond drill data, mineral resource estimates and technical studies.

2.5 Project Alternatives

Victory Nickel Inc. sees no feasible alternative to Minago Project. The project is the principle asset of VNI and although there are other mineral deposits in the Minago Area, VNI does not own any interest in them and therefore cannot effect the evaluation of the possible co-development with the Minago deposit. Similarly, currently it is not possible to consider the potential addition of other deposits that may be discovered through exploration. Given the current and future global market for Nickel, the proposed project is the best available option to achieve the business goals of the company.

VNI has assessed a number of alternatives in coming to the proposed design of the Minago Project. The alternatives considered include the various ways that the project could be implemented or carried out, including alternative locations in the project area, routes and methods of development, implementation, and mitigation.

Examining the main project alternatives involved answering the following three questions:

1. What alternatives are technically and economically feasible?
2. What are the environmental effects associated with the feasible alternatives?

3. What is the rationale for selecting the preferred alternative?

Throughout the Minago Project design process, various mining concepts were developed, analyzed, refined and eventually focused down to preferred alternatives. This section describes alternatives that were considered by VNI, and the rationale for selecting the preferred alternative.

The decisions made by VNI and its consultants for the purposes of project design and mine planning are based on feasibility level information. This information provides a reasonable basis for detailed design.

2.5.1 Mining Method

A conventional open pit with full seven and two partial years of ore production life is envisaged after dewatering the overburden and overlying limestone and sandstone. Twelve metre bench heights will be used. A contractor will be employed to remove the overburden and some limestone during the two pre-production years. Equipment will be purchased to utilize the favourable electric power costs in Manitoba. Electric hydraulic shovels will load ore and waste into 218 tonne haul trucks.

Underground operations have been considered but were deemed to be uneconomical due to poor ground control and low-grade aspects. Open pit mining is the only feasible means of extracting the Minago deposit. There will be two products mined from the open pit – frac sand and nickel ore. Frac sand will be mined after the overburden materials (peat and clay and dolomitic limestone) have been removed. The removal of the frac sand will expose the nickel ore. Open pit mining method is the most optimal extraction method to extract both frac sand and nickel ore.

2.5.2 Pit Location

The pit is located where the ore is and therefore, there is no viable alternative.

2.5.3 Ore and Waste Haulage

VNI will use 218 tonne trucks to move ore to the mill and waste rock to the waste rock dumps. The 218 tonne trucks are the most economical mode of transportation bearing in mind the waste-to-ore ratio of 6.7 to 1 for mining the nickel sulphide ore and the frac sand. Transportation of ore and waste rock using high capacity equipment is the most viable approach and therefore, there is no viable alternative.

2.5.4 Ore Processing

Conventional flotation will be employed by VNI to process the ore, as there is no viable alternative. The process flowsheet will consist of crushing plant, grinding circuit and a concentrator.

2.5.5 Waste Rock Disposal

The locations of the waste rock dumps and overburden stockpile are selected to optimize hauling costs and are located in the vicinity of the open pit. The waste rock dumps for Country Rock and Dolomite and overburden stockpile locations were selected based on geotechnical investigation results and for the following reasons:

- they are located near the pit to optimize haul distances;
- the overburden is largely clay;
- there will be large waste rock volumes; and
- the waste will be Non-Acid Generating (NAG).

The existing facilities have adequate storage capacities for the waste rock that will be generated from pit during development and operational phases and as such, no alternative to the existing infrastructure were examined. During the operations phase, waste rock will be disposed into the dumps. The Overburden, Dolomite and Country Waste Dumps will store approximately 11 Mt of overburden, 90 Mt of limestone waste and 122 Mt of granitic (country rock) waste, respectively. Approximately 35.67 Mt of ultramafic waste rock will be co-disposed with tailings in a Tailings and Ultramafic Waste Rock Management Facility (TWRMF). Co-disposal will minimize metal leaching and increase the stability of the tailings management area.

2.5.6 Tailings Disposal

Sub-aerial disposal of liquid tails (slurry) was selected for the property. An alternative method involving the on-land disposal of dry tailings in paste form was assessed. Advantages of paste tailings disposal are:

- A tailings dam does not have to be constructed, removing a significant capital cost item.
- Water does not have to be managed to prevent the oxidation of potentially acid generating materials.

The disadvantages of this option are:

- Dust can be generated from the tailings.
- Pumping is more difficult and expensive than for liquid tailings.

- Operating costs are higher due to the pumping and, potentially, the need to add minimal cement to the tails to retain its form as paste.

The most significant reason for selecting sub-aqueous disposal of liquid tailings is that VNI prefers to adopt proven technology rather than embark on a pioneer project. While numerous operations have elected to select paste tailings disposal in favour of sub-aqueous disposal, these are primarily gold operations with benign tailings.

2.5.7 Tailings Facility Location

There are numerous interdependencies among facilities that dictated the order in which they would be located. VNI located the tailings facility based on results of site surveys, test pits and reviews of past work. Wardrop Engineering Inc. conducted an assessment of potential tailings facility (TF) locations in 2007 and 2008. The Tailings and Ultramafic Waste Rock Management Facility (TWRMF) is located reasonably close to the mill.

The TWRMF location is the preferred location for the following reasons:

- The dam will be cost effective to construct as it is near the open mine, which is earmarked to be the source of the construction materials.
- Co-disposal of tailings and ultramafic waste rock will minimize metal leaching and will increase the stability of the facility.

VNI's closure objective is to design and manage the TWRMF to enable the site to be left without requirements for long-term water treatment.

2.5.8 Camp Location (Operational and Construction Camps)

The following two alternatives were considered for the camp location:

- Off site (South of the property near the existing William River Camp); and
- On site.

VNI selected the on site option as the preferred site for the camp. VNI assumes that the differences in the two locations, from an economic and technical perspective were significant so as other factors, such as health and safety aspects, were considered.

Locating a camp on site would be closer to the working area and will minimize travel time and eliminates the carbon footprint. The chosen site has the advantage that personnel can walk to or from the industrial complex to the camp and additional transportation will not be necessary.

The main disadvantage of locating a camp at the existing site in the vicinity of William River is that it is too far from the Minago site and VNI would have to provide transportation to the project site. This would increase the carbon footprint and may be a problem during winter storm events.

2.5.9 Power Supply

The Minago project will require a continuous power supply for the industrial complex, the camp and supporting facilities. The type of the energy sources used in the operation will have an immediate impact on the capital requirement and the on-going cost of the project. The three energy sources considered for the project and their limitations are as follows:

- Connection to the Main Grid - the connection to the existing Manitoba Hydro power grid will require a high voltage line located approximately 300 metres from the site access. Based on the proximity of the power grid, this option is considered viable.
- Natural gas power generation - previous studies of other mines have indicated that the natural gas and diesel based power generation systems have comparable reliability. However, the diesel generators seem to be 5% to 10% more efficient than natural gas. Diesel fuel is quite expensive and will result in significant operating costs and therefore, the genset option is not considered viable. Natural gas turbines are economical for processes that require high heat or where natural gas supplies, such as pipelines and wells, are nearby. Since there are no gas sources in the area of the project and the diesel-based system provides higher efficiency, the natural gas power generation is not considered viable.
- Hydropower generation - generally hydropower provides the environmentally cleanest operation with the lowest operating cost structure. There are disadvantages; however, such as very high initial capital cost investment, long payback period and complex regulatory requirements with a possible four to five year approval period. In addition, there are no water bodies in the immediate area that can be used for hydropower development. This option is not considered viable.

2.5.10 Site Access Road Location

The Minago Nickel Property (Property) is located 485 km north-northwest of Winnipeg, Manitoba, Canada and 225 km south of Thompson, Manitoba on NTS map sheet 63J/3. The property is approximately 100 km north of Grand Rapids off Provincial Highway 6 in Manitoba. Provincial Highway (PTH) 6 is a paved two-lane highway that serves as a major transportation route to northern Manitoba.

The Minago Project is located just off PTH6 and to access the proposed industrial area will require a maximum of 4 kilometres of road development. The road network to be constructed at the Minago Project will be located in the VNI Mineral Lease Parcel. VNI commissioned environmental baseline studies to determine current baseline conditions. The assessment

included air photo and map reviews, and paper route projections. Helicopter reconnaissance and selective ground truthing was conducted. The key design and assessment requirements that were considered included:

- land tenure;
- the avoidance of environmentally sensitive areas such as streams, and wildlife critical habitat areas;
- alignment gradient and length; and
- the presence of bedrock and blasting requirements.

Based on these assessments, VNI optimized the design of the main access road to minimize environmental impacts and construction costs.

Grand Rapids, the closest community to the Property, is located where the Saskatchewan River flows into Lake Winnipeg. In 1996, Grand Rapids had 404 residents (1996 census). The economy of Grand Rapids is based on commercial fishing, hydroelectric generation, tourism, forestry, trapping.

Grand Rapids is served by an RCMP detachment, a nursing station, daily bus and truck transportation to Winnipeg and a 1.02 km grass/turf airstrip in addition to a number of small supply and service businesses.

Provincial Highway 6 crosses a portion of the Property and a network of diamond drill roads enables pickup truck travel on the Property in the winter and all terrain vehicle (Argo) travel in the summer.

The Omnitrac Canada railway line connecting the southern prairie region of western Canada to Churchill, Manitoba (a seasonal seaport) crosses Provincial Highway 6 approximately 60 km north of the Property.