

TABLE OF CONTENTS PAGE

1. INTRODUCTION 1.1

1.1 The Taltson Expansion Project 1.1

 1.1.1 Project Development Background 1.1

 1.1.2 Expansion Project Overview 1.2

 1.1.3 Project Rationale 1.8

 1.1.4 Taltson Expansion Project as a Sustainable Development 1.9

1.2 Developer’s Assessment Report - Document Overview 1.9

TABLE OF FIGURES

Figure 1.1 — Existing Facilities Overview 1.4

Figure 1.2 — Expansion Project Overview 1.5

Figure 1.3 — Nonacho Lake Control Facilities 1.6

Figure 1.4 — Twin Gorges Expansion Facilities 1.7

TABLE OF TABLES

Table 1.1 – DAR Organization 1.12

APPENDICES

1A MVEIRB Terms of Reference

1. INTRODUCTION

1.1 THE TALTSON EXPANSION PROJECT

1.1.1 Project Development Background

The Taltson Expansion Project (the Project) is a private sector hydropower infrastructure initiative that expands the capacity at the existing 18 MW Taltson Twin Gorges generating facility, located approximately 56 km northeast of Fort Smith and 285 km southeast of Yellowknife (Figure 1.1). The existing facility, owned and operated by the Northwest Territories Power Corporation (NTPC), was constructed by the Northern Canada Power Commission in the mid-1960s specifically for power supply to Cominco's Pine Point Mine. The facility has operated at much reduced capacity since the closure of the mine in 1986, as the customer load from the serviced communities has not replaced the original Pine Point Mine load. Through the 1990s, a number of initiatives to use the excess energy available from Taltson Twin Gorges were studied, but none were found to be economically viable. In 2003, with the support of NTPC and the Government of Northwest Territories (GNWT), a study began on the utilization of the surplus potential of the existing plant (approximately 10 MW), in combination with a small new plant, for the then-proposed Snap Lake Diamond Mine. Baseline environmental work associated with this concept was also undertaken through the field season of 2003.

While the more limited expansion concept was not shown to be economically attractive at that time, a conclusion of the 2003 study program was that the Twin Gorges site could support a substantially larger project than that required for only the Snap Lake Mine power supply. Additional studies in 2004 focussed on a development concept for a larger expansion of the existing facility and the supply of power to other mines. These studies included a comprehensive evaluation of basin hydrology and initial site capacity assessment, the concept design for several alternative plant layouts, the evaluation of a number of transmission corridors from Twin Gorges to the four diamond mine sites, and preliminary customer discussion and economic evaluations. A consultation process with potential stakeholders was also initiated. Design development and field study was curtailed through 2005 pending further discussions with stakeholders, but resumed fully in 2006.

Further directed studies and environmental work since 2006 have shaped the proposed Project to its current form, wherein the Project interlinks a new plant to the existing facilities and both generation plants through a new 161 kV transmission system to supply high quality electrical power to all four operating/planned diamond mines – BHP's Ekati mine, Rio Tinto's Diavik mine, DeBeers' Snap Lake Mine and the proposed Gahcho Kué diamond mine.

The Project would provide a long-term and reliable source of renewable electricity to these existing and planned mines, displacing a significant proportion of their current diesel generation requirements. As these mines complete their lives, power would become available for other potential customers. The existing customers of the Taltson facilities would continue to receive reliable hydropower at regulated rates through the existing 115 kV transmission and interconnection facilities.

1.1.2 Expansion Project Overview

The Expansion Project comprises the following specific development components:

- A new control structure on Nonacho Lake including a micro-hydro plant for site-generated power, and refurbishment of the existing rock-fill dam and spillway at the lake outlet;
- A new generation plant adjacent to the existing Taltson Generating Station at Twin Gorges, using the same Forebay as the existing plant, with an installed capacity of up to 56 MW;
- Ancillary release facilities from the Forebay, including a minimum release structure located on the South Valley Spillway to maintain flows in Trudel Creek, and a gated bypass spillway next to the existing plant to maintain flows below the generation facilities;
- A new switchyard at Twin Gorges interconnecting the existing and new generating stations to support both 115 kV and 161 kV transmission voltages;
- Life extension refurbishment of the existing 18 MW plant; and
- A 161 kV transmission line from Twin Gorges northeast around the East Arm of Great Slave Lake to Gahcho Kué, north to Ekati/Diavik, and west to Snap Lake, interconnecting the generating plants to all four operating and/or planned mine sites.

A project overview is shown in Figure 1.2, and a brief description of the proposed facilities is provided below.

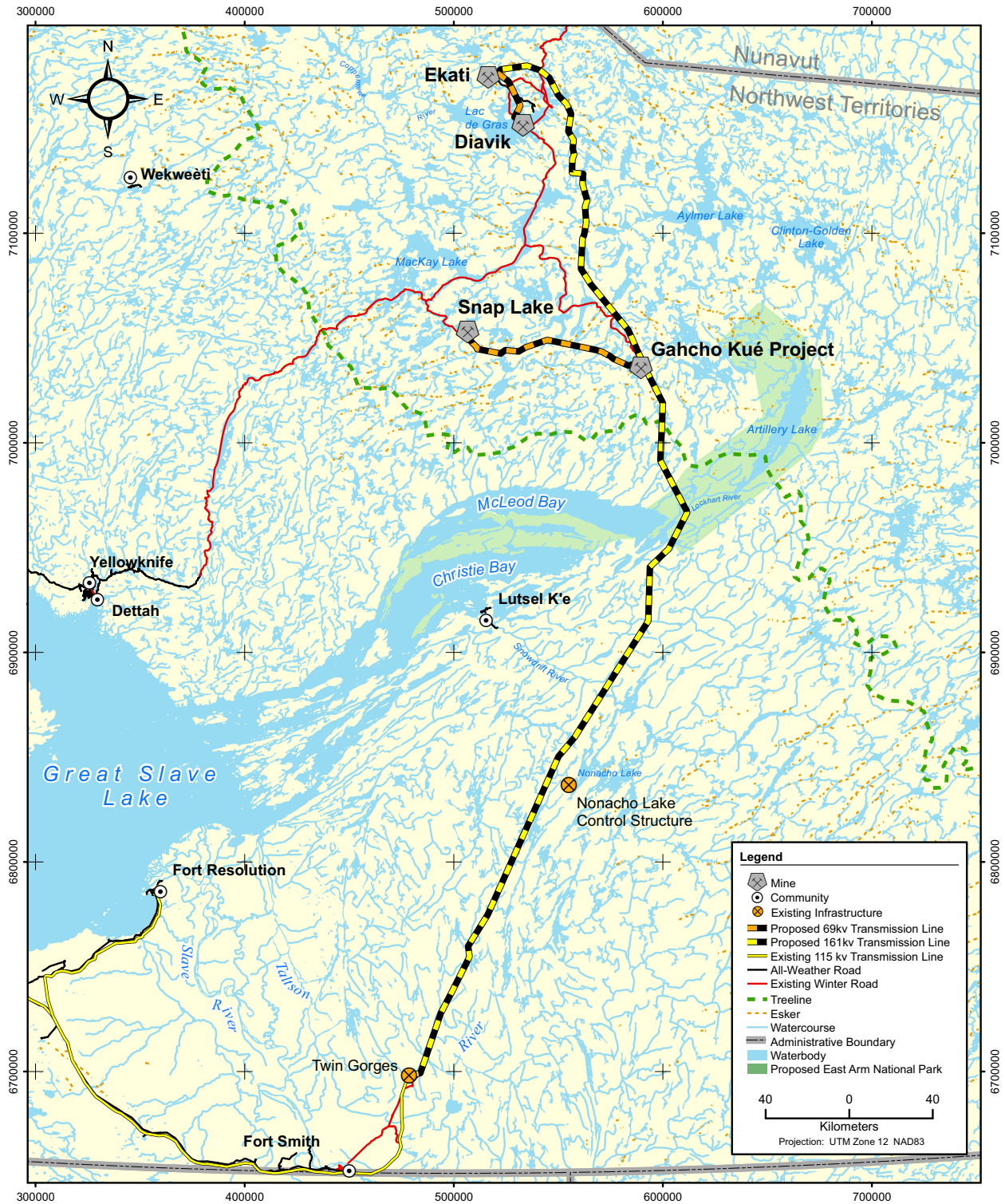
The new Nonacho Lake control facility would be constructed immediately adjacent to the existing dam. The facilities are shown in Figure 1.3. The control structure would be built into a canal, and comprise four gates in a concrete structure that can provide a wide range of release and regulation capacity to the outflows of Nonacho Lake. The existing spillway crest would be raised by 0.5 m, but remain free-overflow above that level. The facility is a key element to the Expansion Project, providing flow control to the generation plants to avoid excess spill and maximize the use of available water for power production and proper minimum release requirements. The facility would include a mini-hydro plant to supply power for gate operation and heating. The facility would be remotely controlled from the generating station or system control center.

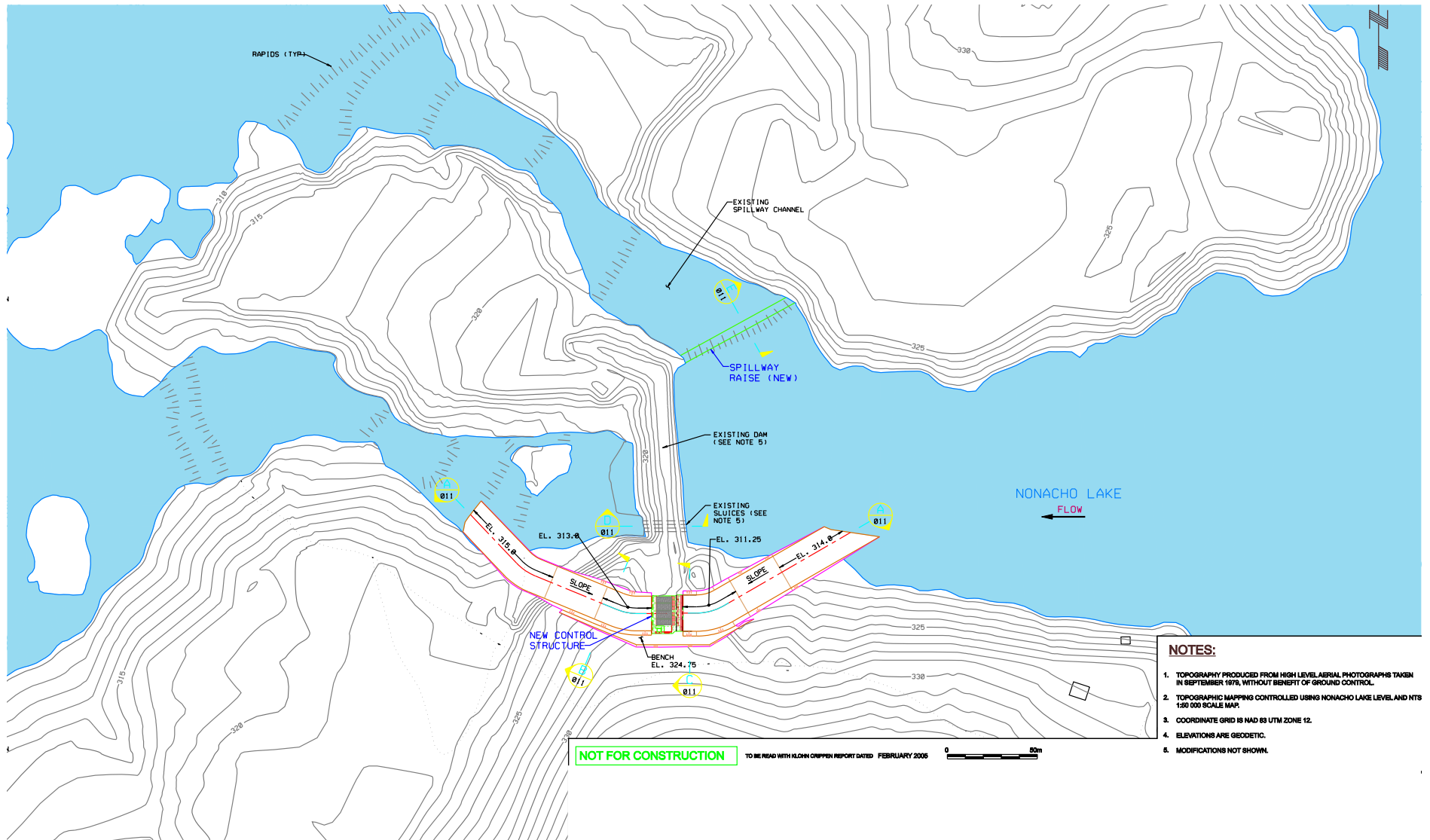
The new generating plant at Twin Gorges would be constructed slightly to the north of the existing plant, connecting the existing Forebay to the Taltson River below Elsie Falls with a 1,250 m long canal, twin set of penstocks, surface powerhouse, and tailrace canal. The site facilities are shown in Figure 1.4. The capacity and number of turbine/generator units to be installed in the new plant would be optimized during the final design stages of the Project. It is anticipated that the plant capacity would be in the range of 36 MW to 56 MW, with a minimum of two new units, for a total installed capacity at the Twin Gorges site of between 54 MW and 74 MW. These limits have been established from consideration of a broad range of influence factors, including hydrological and cost optimization, and contractual load requirements, which are to be finalized during advanced customer negotiations.

The existing 115 kV transmission line to Fort Smith and communities beyond would be interconnected to the new switchyard and could be supplied from either the existing or new plants, increasing overall delivery reliability for all existing customers. The new 161 kV transmission line would originate in the same switchyard and run northeast from Twin Gorges, generally paralleling the mainstem Taltson River and Nonacho Lake, around the East Arm of Great Slave Lake, and northward to Gahcho Kué, a total distance of 385 km. The 161 kV line would branch at Gahcho Kué, with a 161 kV or 69 kV line running west approximately 96 km to Snap Lake, and 161 kV line running north 188 km to Ekati. A short branch line of 33 km would interconnect Ekati to Diavik. The total new line required is approximately 700 km. The transmission line route is shown in Figure 1.2.

In addition to the new substation at Twin Gorges, four new substations, one at each mine site, would be required. These substations would step the voltage down from the incoming high voltage to mine site voltage levels, typically 4.3 kV. The substations would also contain circuit breakers and isolation equipment, and protection and control, metering, and voltage stabilization equipment.

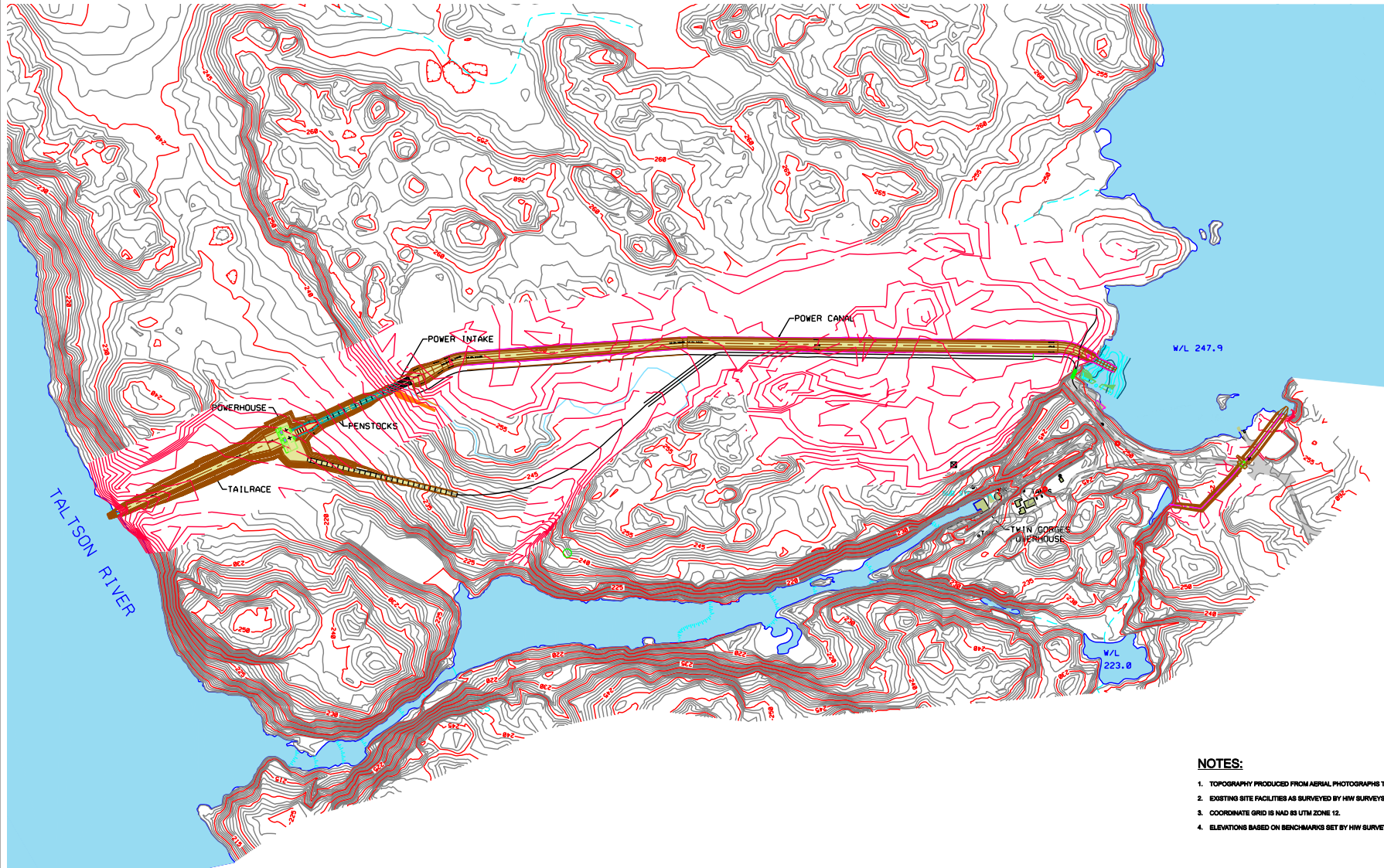






- NOTES:**
1. TOPOGRAPHY PRODUCED FROM HIGH LEVEL AERIAL PHOTOGRAPHS TAKEN IN SEPTEMBER 1978, WITHOUT BENEFIT OF GROUND CONTROL.
 2. TOPOGRAPHIC MAPPING CONTROLLED USING NONACHO LAKE LEVEL AND NTS 1:25 000 SCALE MAP.
 3. COORDINATE GRID IS NAD 83 UTM ZONE 12.
 4. ELEVATIONS ARE GEODETIC.
 5. MODIFICATIONS NOT SHOWN.

NOT FOR CONSTRUCTION TO BE READ WITH KLOHN CRIPPEY REPORT DATED FEBRUARY 2005



NOTES:

1. TOPOGRAPHY PRODUCED FROM AERIAL PHOTOGRAPHS TAKEN IN OCTOBER 1987.
2. EXISTING SITE FACILITIES AS SURVEYED BY HW SURVEYS LTD., JULY 2003.
3. COORDINATE GRID IS NAD 83 UTM ZONE 12.
4. ELEVATIONS BASED ON BENCHMARKS SET BY HW SURVEYS IN 2003.

1.1.3 Project Rationale

The Taltson Hydroelectric Expansion Project is a business venture designed to be completely self-supporting and ultimately to bring valuable economic returns to the Project owners and economic stimulus to the region. The ownership structure, comprising the Akaitcho Energy Corporation, the Métis Energy Company Ltd., and the NWT Energy Corporation (03) Ltd. provides a unique opportunity for collaboration and cooperation among the Aboriginal nations of the region. The Project has potential to build common interests and working ties among the Aboriginal groups. By undertaking a joint venture between a Crown corporation and Aboriginal nations, the Project builds trust and may introduce opportunities for similar undertakings in the Northwest Territories in the future. On the basis of the current financial model, the Project is anticipated to bring very positive socio-economic benefits to the South Slave region.

The Expansion Project provides an opportunity to fully optimize the hydrological resource development of the Twin Gorges site with a very limited incremental environmental effect. The Project would deliver significant emission reductions on a regional level through the displacement of current and planned diesel generation at the mines through the potential displacement of up to 56 MW of existing and/or planned diesel generation by zero-emission and renewable hydropower generation. At anticipated generation reliability rates, the Project would supply 390 GWh of energy per year to the mines. This clean energy supply would replace annual consumption of 101 million litres of diesel, which corresponds to approximately 2,025 Super B Train loads each winter on northern roads. This level of diesel displacement equates to a reduction in greenhouse gas emissions of 280 kilotonnes of CO₂ annually.

Over the longer term, this project offers a viable and stable source of revenue to all of the Project owners. In addition, the employment of tradespersons during the three-year period of construction would generate opportunities for residents of the North and South Slave areas. The Project would also employ a small complement of skilled staff during operations.

There are no technical hurdles that represent fatal flaws for the design, construction and operations of the Taltson Expansion Project. With proper consideration of unique climate conditions and remoteness issues, the design of the Project facilities would follow standard practices for hydroelectric plants. The site conditions are considered favourable and low risk for the proposed development. Construction logistics would present challenges, particularly for site access, but would be developed and implemented by Contractors with experience in the north, where such issues are regularly encountered. The Project hydrology is considered sound and offers plant sizing which accords well with anticipated demand from the existing and new mine customers.

As is well-demonstrated by the existing Twin Gorges facilities, which continue to supply reliable power after 42 years of operation, hydroelectric infrastructure that is well-maintained generally offers a significant lifetime. Facilities associated with the Project would provide predictable and sustainable performance for periods longer than those for which economic conditions and specific operating requirements can reasonably be forecast. While costly in terms of initial capital investment, sources of

renewable and reliable generation generally prove to become tremendous regional assets. The Taltson Expansion Project would easily outlive all of the mines that are forecast to become initial customers, and with other loads that would arise, would no doubt continue to bring substantial benefits to the South Slave region for many decades to come.

1.1.4 Taltson Expansion Project as a Sustainable Development

The Dézé vision for this Project began with a simple concept - Project ownership, thus Project control, by the residents that live within the influence of the Project. The regional residents, comprised primarily of Akaitcho First Nations, the Northwest Territory Métis Nation, and other residents of the South Slave region, have come to appreciate the value in this concept through the dedicated efforts of representatives from the Aboriginal nations and the GNWT. The fundamental interest in the concept ultimately led to the signing of a Memorandum of Understanding that established a framework for the three organizations to work together to maximize the efficiency of the existing power facility and increase power production in a manner that adheres to the principles of sustainability.

The goal of Dézé is to enable the owners groups to work together with a common mandate to pursue mutually beneficial interests, including environmental and cultural protection as well as economic and social benefits, through the various stages of the Expansion Project from design through to operations and beyond. As a result of the unique ownership by Dézé, principles of sustainable development have been and would continue to be woven the into all Project phases, including design, construction, operations, future direction, and mitigation measures.

These regional to global influences of the Project not only span the timeframes of the current local generation, but also contribute to the security and availability of natural resources, including air, earth, and water, for future multi-national generations.

1.2 DEVELOPER'S ASSESSMENT REPORT - DOCUMENT OVERVIEW

This document comprises the Developer's Assessment Report (DAR) for Dézé Energy Corporation Ltd.'s Taltson Hydroelectric Expansion Project as summarized above. The report has been prepared on the basis of the Terms of Reference issued to Dézé by the Mackenzie Valley Environmental Impact Review Board (MVEIRB) in March, 2008, (Appendix 1A) and builds upon the Taltson Expansion Project Description and associated Land Use and Water License applications submitted to the Mackenzie Valley Land and Water Board by Dézé in May, 2007, and referred to the MVEIRB in October, 2007.

The Terms of Reference for the Taltson Expansion Project were prepared by the MVEIRB to address all relevant issues and concerns that stakeholders, agencies and regulatory authorities sought to have assessed. These issues encompass a broad range of topics with some requiring greater effort in effects assessment than others. The Terms of Reference were therefore structured with a hierarchy of assessment requirements as described by the MVEIRB (2008):

Key Lines of Inquiry are areas of the greatest concern that require the most attention during the environmental assessment and the most rigorous analysis and detail in the DAR. Key Lines of Inquiry have been selected to

ensure a comprehensive, detailed analysis of the issues that the Review Board has identified. The three Key Lines of Inquiry deal principally with the biophysical environment.

Subjects of Note require a thorough analysis, including a cumulative effects assessment component, but do not require the same level of detail as Key Lines of Inquiry. As a result of the scoping exercises and its own consideration, the Review Board has defined twelve Subjects of Note.

The three Key Lines of Inquiry (KLOI) are:

- Barren-ground caribou,
- Water fluctuations in the Taltson River Watershed, and
- Ecological changes in Trudel Creek.

The Subjects of Note (SON) are divided into biophysical and socio-economic interests as follows:

Biophysical

- Canal construction,
- Turbine and conveyance and canal operation,
- Species at risk and key bird species,
- Access,
- Climate change, and
- Key furbearing species and ungulates.

Socio-Economic

- Short and long-term employment and training,
- Regional economic development,
- Impacts on tourism potential and wilderness character,
- Legacy issues,
- Impacts on harvesting and land use, and
- Heritage resources.

Other key interests that were identified in the TOR included:

- A study of Project alternatives, specifically routing of the proposed transmission line,
- Assessment of cumulative effects, and
- Evaluation of the Project as a sustainable development.

In addition, the TOR grouped a number of other interests as Remaining Issues.

To present the required material in an organized and readable format, the DAR chapters generally move from introductory or background information, through a detailed Project description with construction definition and alternatives studies, into the existing environment and detailed effects assessments, and concludes with an evaluation of the Project as a sustainable development.

Each Key Line of Inquiry is contained as a main chapter. Subjects of Note are grouped into a single chapter. As appendices are of interest to a limited audience, in consideration of the environment, appendices are contained in digital format on disk with each DAR. Dezé will make available to requesting parties a print copy of any appendix.

While the DAR is primarily organized according to the TOR, in some cases, the structure has been reorganized based on information available, logical sequencing, and document flow. Key changes between the TOR and the organization of information in this DAR are discussed below.

The existing environment is presented in Chapter 9. In general, this section contains information that is relevant to all Project components, broad geographic areas, or regional descriptions. When existing environment information is localized, or related to a specific Project component, detailed area of interest or a specific KLOI or SON, that information is contained with the relevant KLOI or SON.

Due to the nature of legacy issues, this topic has been addressed separately from the other SON, and is contained in Section 9.6 – Human Environment. Legacy issues have been brought forth during Dezé consultation with communities and during the MVEIRB scoping sessions. As a result, Dezé commissioned R. Freeman to investigate the history of the area and of legacy issues, to enable Dezé to better understand the issues and any Project-legacy issue relationships. Although Dezé cannot take responsibility for past legacy issues caused by existing developments, Dezé is committed to avoiding a repeat of activities that resulted in the legacy concerns in the first instance, and the introduction of new negative legacy issues, through Project planning and design that incorporate and embed the principles of sustainability, including economic, environmental, social and cultural well-being. These efforts are documented throughout the Subjects of Note and Key Lines of Inquiry; therefore, an effects assessment on legacy issues according to assessment methodology would not be practical. Chapter 18 – Sustainability provides an evaluation of the Project's adherence to the principles of sustainability, which may also be considered as an evaluation of the legacy of the Project.

Assessment items identified in the TOR as Remaining Issues are embedded in a KLOI or SON of the appropriate discipline. Remaining Issues that were requests for additional information, as opposed to assessment requirements, are contained in the appropriate section of the DAR. For example, a request for additional Project infrastructure information would be contained in Chapter 6 – Development Description.

The reader would also find that cumulative effects assessments have been included in individual KLOI or SON, as appropriate. Chapter 19 presents a comprehensive summary of Project cumulative effects.

To ensure that the contents of the TOR are addressed in this report, a Table of Concordance that cross-references the TOR to the information and location in this DAR is contained in the Preamble. The general organization of this DAR is outlined below in Table 1.1.

Table 1.1 – DAR Organization

Section	Overview of Chapter Contents
Executive Summary	Provides a summary of the proponent, the Project, purpose and rationale, and key effects assessments associated with the transmission line and with increased management of flows in Taltson River and Trudel Creek
Preamble	Table of Contents, Tables, Figures, Plates, and Appendices Table of Concordance Glossary and Acronyms Acknowledgements
Chapter 1	Provides an introduction to the Project and an overview of the organizational structure of the DAR
Chapter 2	Overviews the MVRMA environmental impact assessment process and the advancement of the Project in this process
Chapter 3	Presents the developer, Dezé Energy Corporation Ltd., and discusses the relationship and interests of the ownership group
Chapter 4	Summarizes the history of engagement that led to the creation of Dezé and the community engagement undertaken by Dezé in relation to the Project
Chapter 5	Describes the purpose and rationale of the Project, including the key environmental, economic and social benefits inherent in the Project, and a brief summary regarding the technical and economic feasibility of the Project
Chapter 6	Presents the Project description, including the existing infrastructure, new facilities, construction approach, project performance and operations, and long-term closure scenarios
Chapter 7	Summarizes Dezé’s preliminary Environmental Management System designed to avoid or mitigate potential negative environmental effects
Chapter 8	Presents and discusses Project alternatives, including power generation siting and capacity, and transmission line routing between Twin Gorges and the customers
Chapter 9	Overviews the existing biophysical, social, economic and cultural environment in which the Project is sited. Relevant and specific conditions of the existing environment are further detailed in the KLOIs and SONs
Chapter 10	Describes the methodology used to conduct the impact assessment for the KLOI and the SON. Variances to this methodology that may have been required to accurately conduct a specific assessment are detailed in the associated KLOI or SON
Chapter 11	Summarizes the scope of the KLOIs
Chapter 12	Assesses the effects of the Project on Barren-ground caribou (KLOI)
Chapter 13	Assesses the effects of water fluctuations in the Taltson River Watershed (KLOI)
Chapter 14	Assesses the ecological changes in Trudel Creek (KLOI)
Chapter 15	Assesses the effects of the Project on specific biophysical and socio-economic and cultural interests (all SON)
Chapter 16	Describes the Project responses to certain key environmental conditions that are likely to occur during the Project lifetime
Chapter 17	Describes and assesses Project accidents and malfunctions
Chapter 18	Evaluates the Project as a sustainable development
Chapter 19	Summarizes the cumulative effects described in the various KLOI and SON
Chapter 20	Summarizes the Project commitments
Chapter 21	Provides document references according to report section