ENOCH CREE NATION   maskêkosihk   **BRIEFING NOTE**

Data Science & Project Overview

Project Overview: This document summarizes the research and data analysis conducted by GuildOne to support the Enoch Cree Nation's (ECN) oil and gas and resource claims. This project involved collecting, integrating, and analyzing large volumes of data to assess potential deficits in the equitable treatment of ECN as an oil and gas producer under Federal management.

Data Collection & Analysis:

- **Data Sources:** GuildOne utilized a diverse range of data sources, including:

- **Enoch Cree Nation Archives:** Containing 757 documents.

- **GuildOne Research Archive:** Including data from government archives, media, court documents, and academic publications.

- **Indian Oil & Gas Canada (IOGC) Document Collection:** Encompassing over 24,000 digitized documents.

- **Federal Government & First Nations Data:** From sources like Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC), the Indian Resource Council, and IOGC.

- **Alberta Government & Resource Data:** Sourced from the Alberta Energy Regulator (AER) and the Alberta Land Information System (AltaLIS).

- **Industry Data:** Provided by S&P Global, IHS Markit, Petrinex, GeoLogix, TransCanada Pipelines (TC Energy), and Western Gas Marketing Limited.

- **Document Analysis:** Over 400 documents were identified as valuable for establishing potential inequities in ECN's treatment regarding oil and gas production.

- **Data Integration & Modeling:** A dedicated project data repository was created to integrate and validate data from multiple sources. Schemas, materialized views, and customized data objects were used to build a responsive data layer tailored to the project's information needs.

1   • **Methodology:** Established data queries, algorithms, and methodologies allowed for efficient
2   data extraction, transformation, and loading into various tools. This facilitated reporting
3   processes and addressed the requirements of analysts and users.

4   **Key Findings & Deliverables:**

5   • **Automated Processing & Analyst Review:** Project estimates and findings were generated by
6   combining automated processing of integrated information with analyst research.

7   • **Reports & Visualizations:** Results were presented through comprehensive reports,
8   incorporating advanced visualization tools, written histories, and claims research reporting.

9   **Key Data Relationships:**

10 The project leveraged key relationships with the AER, S&P Global, and AltaLIS. Data integration from
11 third-party sources, including TC Energy and Western Gas Marketing Limited, provided crucial
12 information for calculating factors, components, and reference data.

13 **Major Solution Phases:**

14 The project involved five key phases:

15 1. **Data Gathering:** Acquisition of data from government, industry, and internal ECN sources.

16 2. **Document Review:** Comprehensive analysis of collected documents, combining machine
17 reading and human analysis.

18 3. **Model Development:** Creation of a solution fabric encompassing data, processes, routines,
19 and queries.

20 4. **Algorithms and Analytics:** Application of algorithms and analytical techniques to generate
21 insights related to production profiles, land analysis, license audits, well profiles, drainage
22 assessments, and rankings.

23 5. **Application & Reports:** Using the processed data and analysis to generate reports and
24 visualizations that support ECN's claims.

25 **Significance:**

26 This research and analysis project provides a comprehensive and data-driven foundation for
27 understanding the historical context of ECN's oil and gas production and any potential inequities in
28 their treatment. The findings and insights generated are essential for supporting ECN's claims and
29 informing future negotiations and decision-making processes.