## Introduction & Audit Scope Overview

This document presents the introduction to the audit report of the $NORAH smart contract system. The smart contract is a modular, multi-layered on-chain financial architecture designed to support a real-world-asset (RWA) tokenization framework anchored in lithium concentrate production and revenue participation.

Unlike single-contract token deployments, the $NORAH system is intentionally structured as an integrated contract suite, reflecting the separation of roles, obligations, and controls typically found in institutional project finance and commodity-backed structures. The audited contracts collectively govern token issuance, commodity-linked minting constraints, revenue obligations, legal covenant abstraction, fiduciary separation, oracle-based verification, and cross-chain asset movement.

The audit therefore evaluates not only individual contract security, but also system-level integrity, including how contractual responsibilities are distributed across components to minimize discretionary control, reduce governance risk, and ensure deterministic execution of economic logic.

### Scope of Audit

The security review covered fifteen (15) smart contracts deployed across EVM-compatible and Solana environments, classified according to their functional role and risk profile:

- **Token Representation & Multi-Chain Issuance** – Core token contracts representing the $NORAH participation unit across EVM and Solana environments.
- **Minting & Supply Discipline** – Contracts enforcing commodity-linked minting logic and automated supply controls to prevent arbitrary issuance or dilution.
- **Revenue Obligations & Distribution Covenants** – Contracts encoding quarterly revenue participation mechanics and non-discretionary distribution rules.
- **Legal & Fiduciary Abstraction Layer** – Smart contracts mirroring real-world legal instruments such as issuance agreements, output rights, future receivables assignments, and SPV fiduciary roles, enabling direct mapping between legal covenants and on-chain execution.
- **Oracle & Verification Integration** – Contracts responsible for incorporating externally verified data inputs required to trigger revenue obligations and system actions.
- **RWA & System Integration** – Components linking real-world asset performance to on-chain logic in a controlled and auditable manner.
- **Cross-Chain & Custody Controls** – Bridge and reserve contracts governing cross-chain movements and associated custody risks.

Each contract was assessed individually and in context, with risk classifications assigned to reflect the potential impact of vulnerabilities at both the component and system level. Where

applicable, critical-risk classifications reflect the economic importance of the contract's role, not a presumption of insecurity.

## Audit Objective

The objective of this audit is to provide assurance that the $NORAH smart contract system:

- Enforces fixed and rule-based token supply mechanics
- Executes revenue participation and distribution logic deterministically
- Limits administrative discretion and custodial control
- Provides transparent, event-driven on-chain accounting
- Reflects institutional-grade separation of duties and risk domains
- Meets security standards appropriate for a production-grade RWA deployment

This report documents the remediation status of the finding, and final certification outcome for the audited contracts.