

# Mining – AI ERP TicketingOS

East African Mining Corporation

Mineral inventory · Exploration data · Haulage · Royalty reporting

## Key ERP Requirements (Mining)

- **Mineral inventory** – Ore grade tracking, stockpile by quality (Fe%, Au ppm), real-time valuation
- **Exploration data** – Drill hole logs, assay results, resource estimation integration (GIS)
- **Haulage management** – Mine to stockpile / port, truck dispatch, weighbridge, tonnage reporting
- **Royalty reporting** – Government royalty calculation (e.g., % of net smelter return), automated returns filing

## Mining Execution Flow (Exploration → Shipment)

ID	Process	Activity	Progress %
5001	Exploration & Drilling	Drill hole logging, sample dispatch to lab	5
5002	Resource Estimation	Block model, grade interpolation	10
5003	Mine Planning	Production schedule, waste-to-ore ratio	20

ID	Process	Activity	Progress %
5004	Extraction (Blasting / Excavation)	Ore/waste segregation, pit GPS tracking	35
5005	Crushing & Screening	Size reduction, grade sampling	50
5006	Stockpile Management	Ore by grade, inventory valuation	60
5007	Haulage to Port / Plant	Truck dispatch, weighbridge, GPS tracking	75
5008	Export Documentation	Bill of lading, certificate of origin, royalty clearance	85
5009	Royalty Reporting	Calculate royalty, file returns, payment to government	95
5010	Customer Settlement	LC negotiation, final payment (USD/ETB)	100

## Royalty & Payment Structure

Milestone	Condition	Royalty % / Payment
Mining license fees	Annual government license renewal	Fixed fee per hectare
Production royalty (mineral)	Based on net smelter return (NSR) or tonnage	3% – 8% of revenue (varies by mineral)
Export sale contract	LC confirmed, shipment bill	80% advance on BL
Final settlement (customer)	Assay verification at destination	20% balance within 30 days

 Royalty module: automatic calculation, government return filing, payment tracking.



## AI Automation for Mining

### Ore grade prediction –

Real-time XRF + machine learning → grade estimation before blasting

### Haulage

**optimisation** – Truck dispatch + pit route  
AI → reduces cycle time by 20%

### Exploration data AI

– Automates drill log interpretation, targets high-potential zones

### Royalty compliance

– Auto monthly royalty calculation, alerts before due date



## ERP Modules

Exploration & resource modelling

Mine production (blasting, crushing)

Stockpile grade management

Haulage & weighbridge

Export & LC management

Royalty & government reporting

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