

# RAPU-RAPU POLYMETALLIC PROJECT MINE REHABILITATION

Rapu-Rapu Minerals, Inc.  
Rapu-Rapu Processing, Inc

By:  
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# PRESENTATION OUTLINE

Project Overview

FMRDP Accomplishment

Current Site Status

Regulatory & Social Responsibility

Conclusion



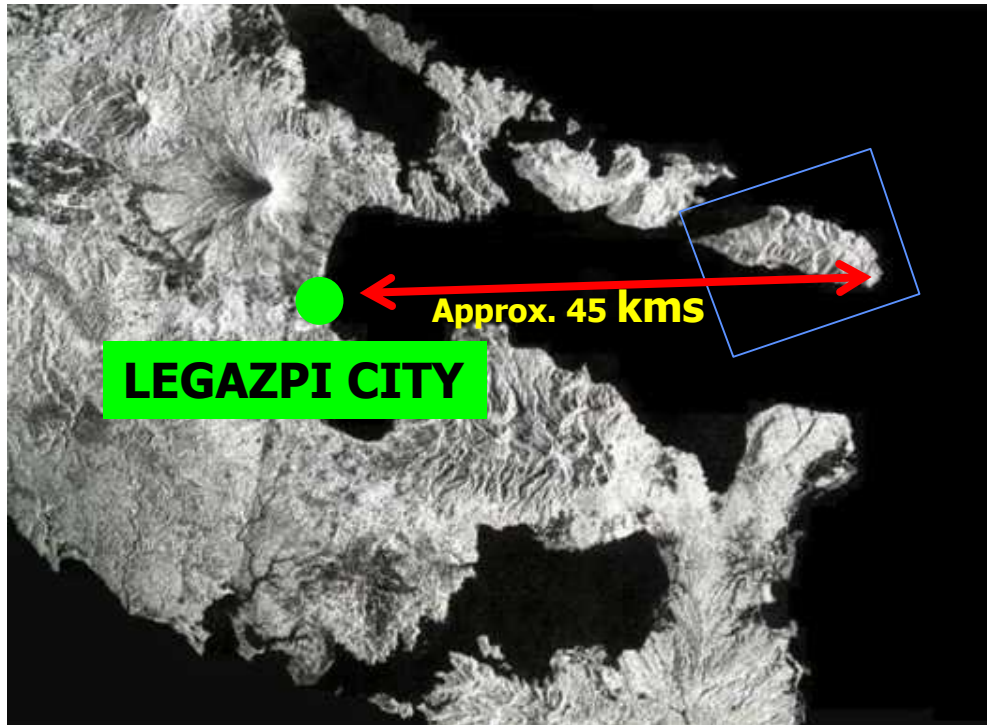


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## LOCATION AND ACCESSIBILITY



**RAPU-RAPU ISLAND**



## MINE DEVELOPMENT AREA (180 Hectares)



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## LAND RECONFIGURATION / RECONTOURING



Backfilling of Open pit  
up to 95mRL



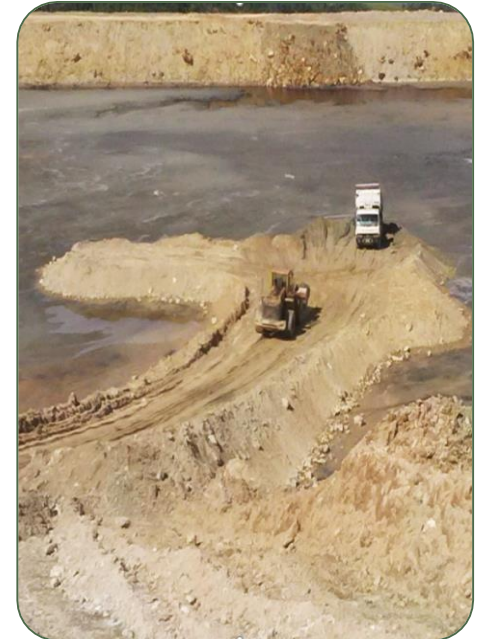
Reconfiguration of  
North wall Open pit  
to flatter slope



Rehabilitation of Old  
SP#1 at  
Environmental area



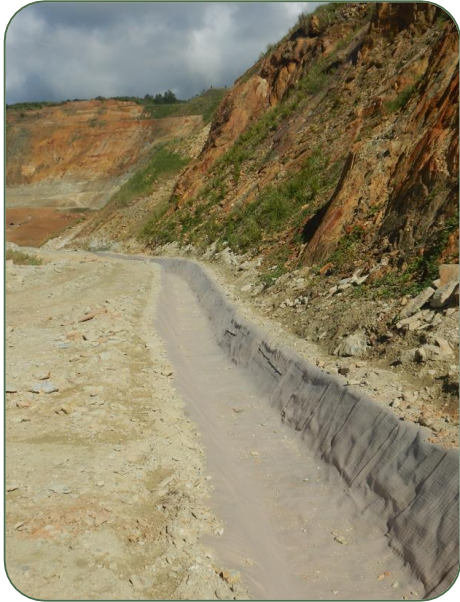
Re-sloping/grading  
the embankment of  
TSF



Covering the TSF  
stored Tailings  
surface



## DRAINAGE SYSTEM



Geo-con matted ditch  
prominent in Open pit  
wall



Geotextile matted ditch  
prominent at TSF  
embankment



Open Drain Channel  
to discharge in-pit  
water



Concrete canal  
constructed in all areas  
with prominent flow of  
water



## WATER TREATMENT FACILITY



Bioreactor

- provides organic carbon and alkali by mixing organic materials with limestone, and removes heavy metals by **Sulfate Reducing Bacteria (SRB)**



Settling Pond

- oxidizes mine drainage by providing oxygen and precipitate heavy metals as hydroxides.



Wetland

- helps remove concentration of heavy metals and neutralize acidic water through its microbial function and plant uptake



## CLAY FOR ENCAPSULATION & TOPSOIL FOR VEGETATION



Open pit bottom



Upper and Lower  
Tailings Storage Facility



ROMPad Area



Process Plant Area



## VEGETATION / PLANTATION



gentle rocky slope as  
creeping media of  
plants



Planting various kind of tree-species such as nurse trees (mostly Agocho, Ipil ipil, Madre de Cacao etc.), food and livelihood source trees and other plants that can be beneficial to the community



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## RECENT ACCOMPLISHMENT

(FINDINGS OF 3<sup>rd</sup> PARTY AUDITOR)

UPPER  
RELIABLE  
CAPTAIN  
TANDIN  
STORAGE  
SITE  
FACILITY

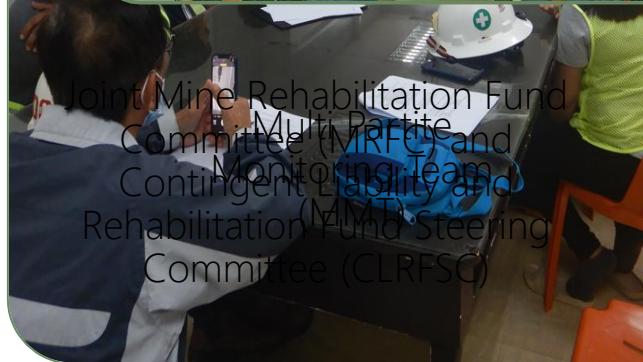
**Poor soil fertility**  
-highly acidic  
-nutrient deficiency

Planting nutrient-fixing  
plants  
Encapsulating open areas  
with clay and topsoil





# MONITORING & REPORTING



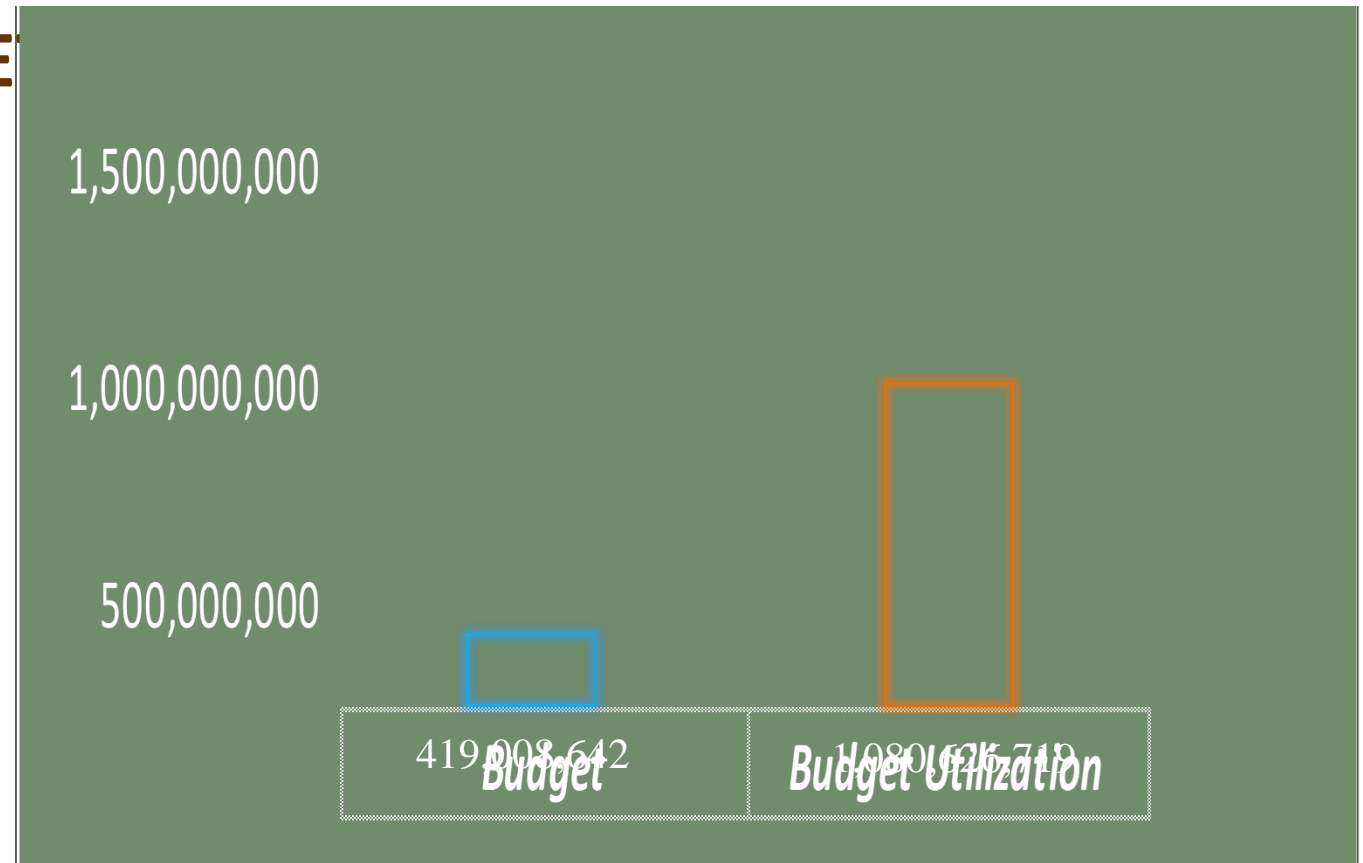
Reporting

Progress/Quality Monitoring

Expert Inspection

## FMRDP BUDGET & BUDGET UTILIZATION

- Revisions of RRPP Final Mine Rehabilitation and Decommissioning Plan (FMRDP) had increased the budget from 157 M to 419 M.
- And to date, the total spent amount by the company for the FMRDP implementation has reached over 1 Billion or more than 2 times the set budget





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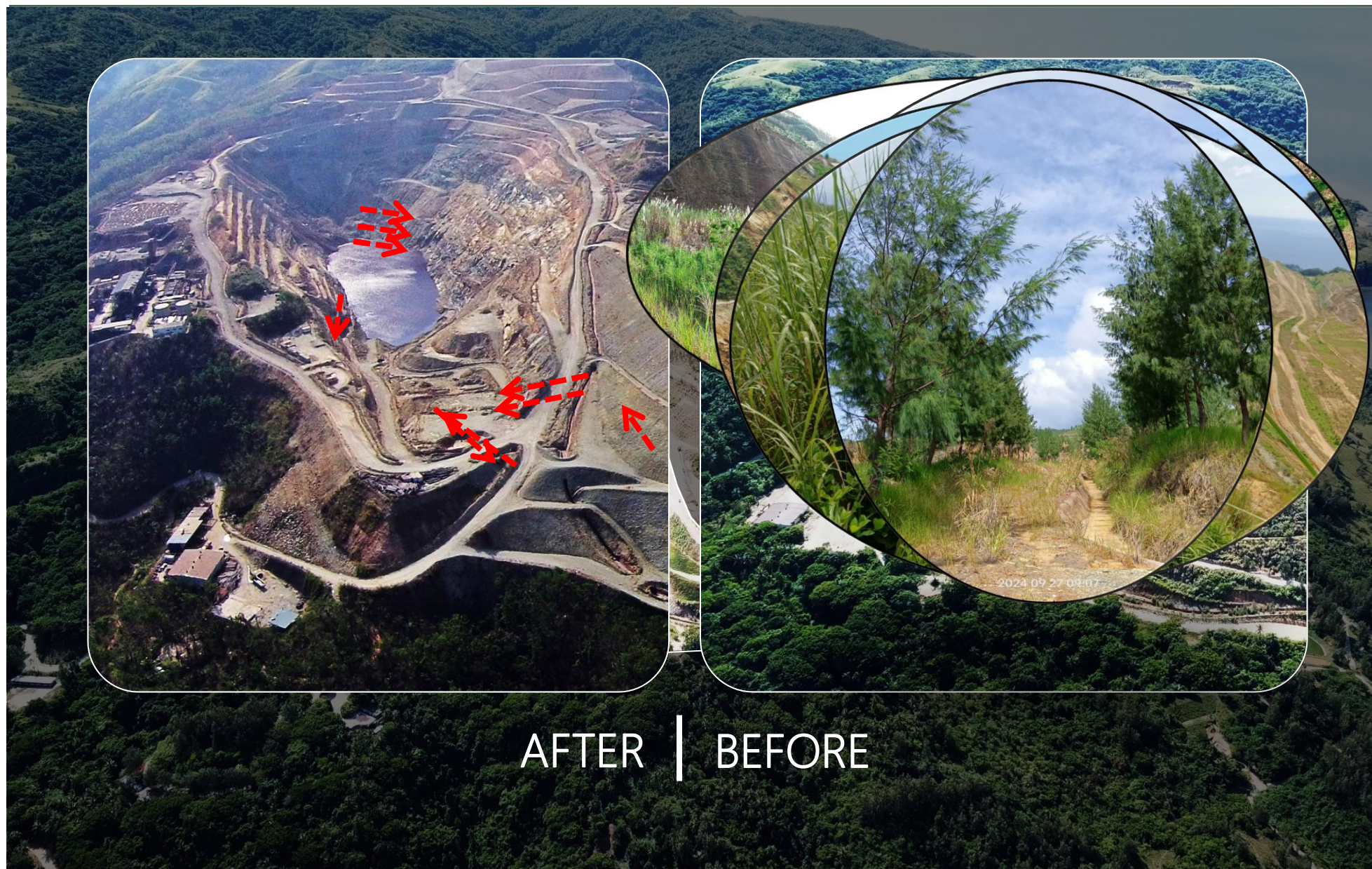


## OPEN PIT

**Pit bottom** : constructed with main canal, with growing vegetation and plantation, established with circumferential base-berms (B-100 and 105mRL) serving as buttress of upper walls

**East side** : constructed with Open Drain Channel to where the concrete canal from West pit passes through and with well growing vegetation

**North side** : flatter benches, toe lines established with Geo-con matted ditches, and with growing vegetation/plantation





## UPPER TAILINGS STORAGE FACILITY

**Embankment** : with fully grown vegetation and few-trees, established with Geo-textile and Geo-con matted ditches in each toelines and constructed with main concrete canal

**Flat area**: with fully grown vegetation and plantation





## LOWER TAILINGS STORAGE FACILITY

**Embankment** : with fully grown vegetation and few-trees, established with Geo-textile and Geo-con matted ditches in each toelines and constructed with main concrete canal

**Flat area**: with fully grown vegetation and plantation





## ROMPAD & PROCESS PLANT AREA

**Rompad** : with growing vegetation/  
plantation and constructed with main  
concrete canal and circumferential  
Geotextile-matted ditch

**Process Plant**: with fully grown  
vegetation and plantation





## ENVIRONMENTAL AREA

Constructed with

**Water Treatment Facility**

- Bioreactors
- Settling Pond
- Wetlands





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SDMP Budget Utilization

- The total shared budget of RRPP for the Social Development and Management Program (SDMP) is Php 225,902,206.39.

YEAR (Operation)	DISBURSEMENT	YEAR (Rehabilitation)	DISBURSEMENT
2005	3,850,000.00	2014-2015	12,415,740.40
2006	5,493,000.00	2016	5,381,641.00
2007	11,400,000.00	2017	2,964,644.49
2008	14,300,000.00	2018	2,488,371.48
2009	13,855,000.00	2019	1,791,950.24
2010	16,053,000.00	2020	5,319,526.66
2011	20,672,000.00	2021	3,305,302.68
2012	56,700,000.00	2022	6,749,590.18
2013	31,681,000.00	2023	6,216,013.36
TOTAL	<b><u>174,004,000.00</u></b>	2024	5,265,425.90
		TOTAL	<b><u>51,898,206.39</u></b>

TOTAL    Php 225,902,206.39



## Development of Host and Neighboring Communities (DHNC)

- Supported 441 preparatory & secondary students and 128 tertiary & taking vocational course students from Direct and Indirect impact Barangays

INFRASTRUCTURES  
LIVING INFRASTRUCTURES  
(Chapel, School, Water supply, Health center, Sports hall etc.)  
IN both school and community (e.g. water supply)  
HUMAN RESOURCE DEVELOPMENT & INSTITUTION BUILDING





## 4 Regulatory & Social Responsibility

### Development of Mining Technology and Geosciences

- Supported 60 scholars (2013-14) at Bicol University and Partido State University as host institutions

Scholarship awarding and MOA signing with 2 Universities offering Mining Engineering Course





## 4 Regulatory & Social Responsibility

### Information, Education and Communication

Orientations and dialogs with the surrounding communities and visitors at site





## COMMUNITY DEVELOPMENT ASSISTANCE PROGRAM (CDAP)

- Corporate Social Responsibility (CSR) Beyond Compliance
- Supported a total of 2,281 scholars

### CDAP BAKWAN (Mangrove Reforestation)

*First reforestation under the National Greening Program 2011 of President Aquino*  
*Renovation and Construction of schools buildings and scholarship programs*



#### BUILDINGS/FACILITIES

- Rapu-Rapu Community College
- Basketball court in Rapu-Rapu National High School
- Repair of Mananao Elementary School

### CDAP FIAT (Feeding Infants And Toddlers)

*Community Based P & D in school Feeding Programs for YAHWEH)*

*Renovation and Construction of Chapels in other communities*



#### REPAIRED CHAPELS

- Chapel of Acal
- Chapel of Mananao.
- Chapel of the Saints in Bacacay, Albay
- Chapel of Viga
- Chapel of Buenavista





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# Conclusion

Through the implementation of comprehensive rehabilitation strategies, we have addressed the environmental impacts of mining activities focusing on soil restoration, water quality improvement, biodiversity enhancement and safety.

RRPP will be a show case for the mine rehabilitation using the Bioreactor Technology in combination with the encapsulation strategy to control the generation of the acid mine drainage caused by the sulphide materials.

Moving forward, continued collaboration with the stakeholders, including government agencies and local communities will be essential. By prioritizing ecological restoration and sustainable practices, we aim to transform the site into a model for responsible mining and rehabilitation, contributing to both the environment and the local economy.





**Statement of Philippine President, Pres. Ferdinand Marcos, Jr. during the PMIEA Awarding in Malacañang Palace :**

“I encourage you to be ambassadors of ***Responsible Mining***. Share your experiences and best practices, not only with your peers but with the next generation of miners, engineers and environmentalists, he said”.

***A 200 page Coffee Table Book will be prepared by RRFMI/RRPI as a way of sharing our Rapu-Rapu Project Mining and Rehabilitation experiences.***