



SOUTHERN ALLIANCE MINING LTD.

# MEMORANDUMS OF UNDERSTANDING SIGNING

# Company Overview

Continued focus on diversification to build a sustainable revenue stream



## Iron Ore



**Chaah Mine**



Mining lease expiry date  
**22 March 2024**



**225.7 hectares**

## Gold



**Tenggaroh Mine, Mersing**



Exploration license expiry date  
**26 January 2024**



**17,767.8 hectares**

## Non- Radioactive Rare Earth Elements



**Paramount Synergy**



**State of Perak**



**State of Johor**

# Rare Earth Elements



Rare earth elements are used across various industries due to their unique characteristics

## Periodic Table of Elements

Period	Group 1										Group 18															
1	H (1.008)										He (4.003)															
2	Li (6.941)		Be (9.012)												B (10.81)		C (12.01)		N (14.01)		O (16)		F (19)		Ne (20.18)	
3	Na (22.99)		Mg (24.31)												Al (26.98)		Si (28.09)		P (30.97)		S (32.07)		Cl (35.45)		Ar (39.95)	
4	K (39.10)		Ca (40.08)		Sc (44.96)	Ti (47.88)	V (50.94)	Cr (52)	Mn (54.94)	Fe (55.85)	Co (58.47)	Ni (58.69)	Cu (63.55)	Zn (65.39)	Ga (69.72)	Ge (72.59)	As (74.92)	Se (78.96)	Br (79.9)	Kr (83.8)						
5	Rb (85.47)		Sr (87.62)		Y (88.91)	Zr (91.22)	Nb (92.91)	Mo (95.94)	Tc (98)	Ru (101.1)	Rh (102.9)	Pd (106.4)	Ag (107.9)	Cd (112.4)	In (114.8)	Sn (118.7)	Sb (121.8)	Te (127.6)	I (126.9)	Xe (131.3)						
6	Cs (132.9)		Ba (137.3)		La (138.9)	Hf (178.5)	Ta (180.9)	W (183.9)	Re (186.2)	Os (190.2)	Ir (192.2)	Pt (195.1)	Au (197)	Hg (200.5)	Tl (204.4)	Pb (207.2)	Bi (209)	Po (210)	At (210)	Rn (222)						
7	Fr (223)		Ra (226)		Ac (227)	Rf (257)	Db (260)	Sg (263)	Bh (262)	Hs (265)	Mt (266)	Ds (271)	Rq (272)	Uub (285)	Uut (284)	Uuq (289)	Uup (288)	Uuh (292)	Uus (0)	Uuo (0)						
6	Ce (140.1)		Pr (140.9)		Nd (144.2)	Pm (147)	Sm (150.4)	Eu (152)	Gd (157.3)	Tb (158.9)	Dy (162.5)	Ho (164.9)	Er (167.3)	Tm (168.9)	Yb (173)	Lu (175)										
7	Th (232)		Pa (231)		U (238)	Np (237)	Pu (242)	Am (243)	Cm (247)	Bk (247)	Cf (249)	Es (254)	Fm (253)	Md (256)	No (254)	Lr (257)										

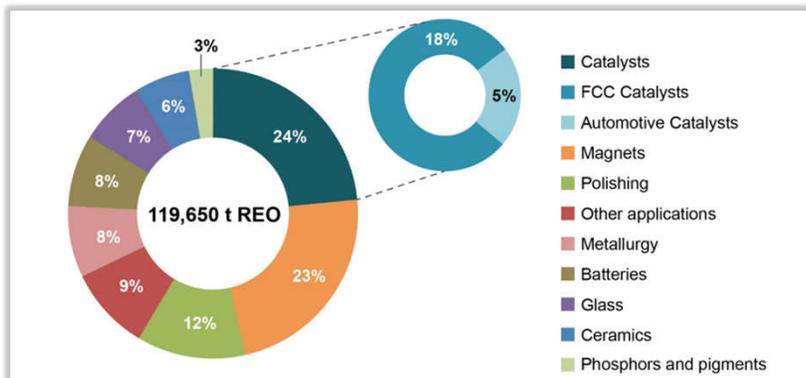
## About Rare Earth Elements (REE)

- There are a total of 17 REE.
- **Wide application** in the manufacturing of modern electric vehicles, green energy generation, electronics like laptops and smartphones and high-performance airframes
- **Currently, China has the highest reserves** of REE
- **Non-Radioactive-REE (NR-REE) in Malaysia amounts to 15.188m MT** with a value of around RM741b, and **most are found in Kedah, Perak, Terengganu, Kelantan, Pahang, Johor.**

# Rare Earth Elements



Rare earth elements are used across various industries due to their unique characteristics

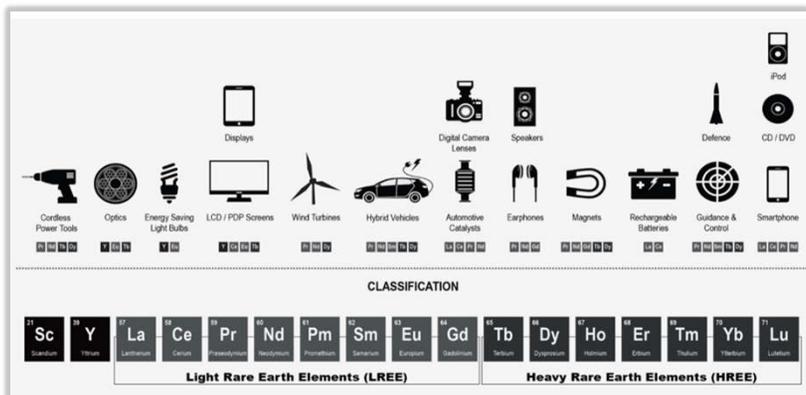


Source: Roskill (2016)

Due to their unique physical and chemical properties, REEs are necessary components across applications such as high-tech consumer product and significant defense applications.

Elements	Usage					Others
	Catalyst	Glass Polish	Magnets	Lasers		
Light REE	La 57	•	•			H <sub>2</sub> Storage, Batteries, Camera Lenses, Flint
	Ce 58	•	•			Ceramics
	Pr 59		•	•	•	Ceramics, Lighting, Flint
	Nd 60		•	•	•	Ceramic Capacitors
	Sm 62			•	•	Neutron Capture, Masers
	Eu 63	•			•	Mercury-Vapor Lamps
Heavy REE	Gd 64		•	•	•	X-Ray Tube, Computer Memory, Neutron Capture
	Tb 65			•	•	Fluorescent Lamps
	Dy 66			•	•	
	Ho 67				•	
	Er 68				•	Vanadium Steel
	Tm 69				•	Portable X-Ray Machines
	Yb 70					Reducing Agent
	Lu 71		•			PET Scan Detectors
	Y 39				•	Superconductors, Microwave Filter

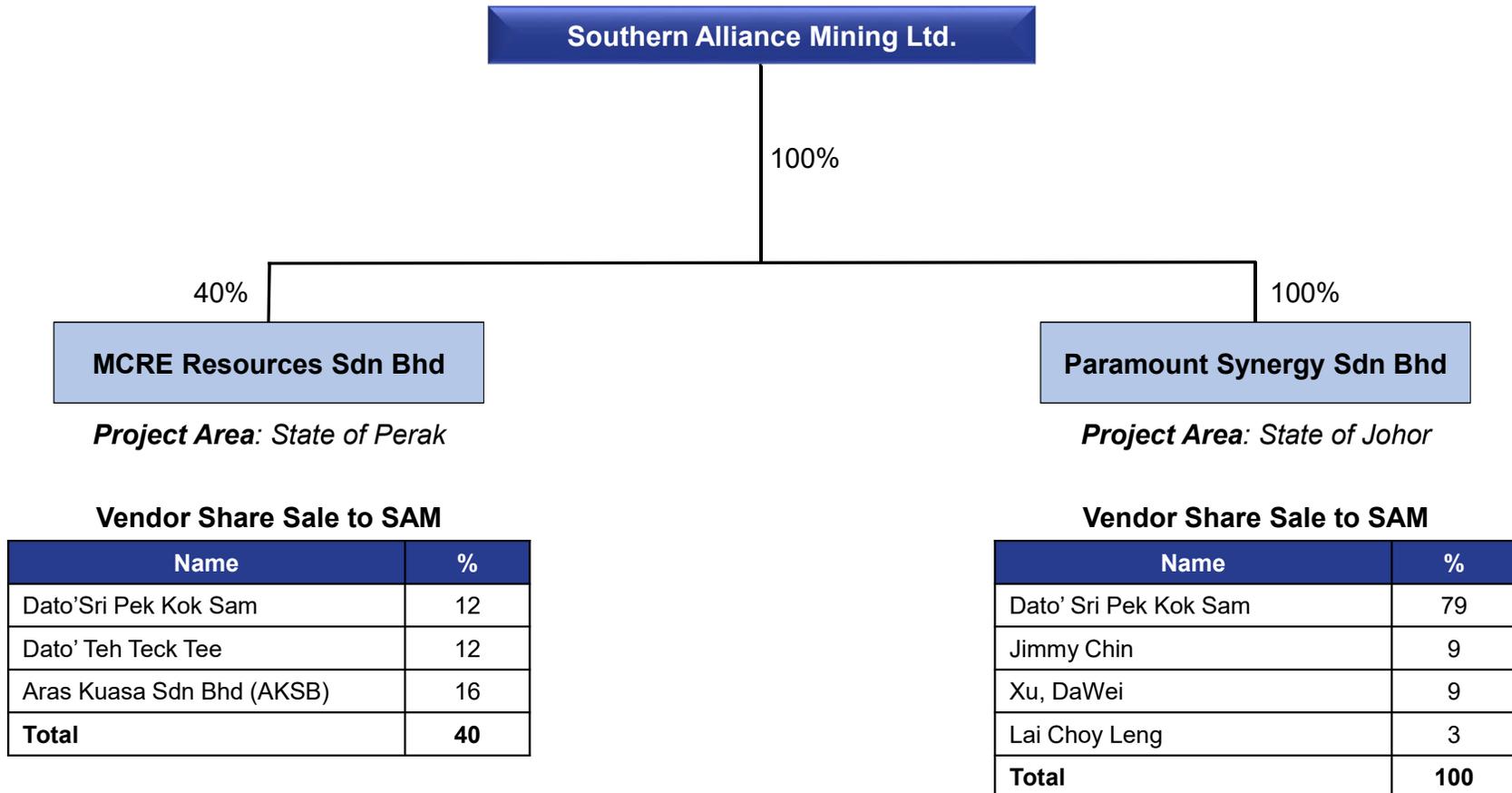
Source: Krishnamurthy (2006)



Source: China Water Risk (2016)

# Targeted Acquisition Structure

SAM signed two MOUs for non-radioactive rare earth mining in Malaysia, focusing on its diversification plans



# Target Companies

## MCRE Resources Sdn Bhd and Paramount Synergy Sdn Bhd



### MCRE Resources Sdn Bhd



Involved in the **exploration, mining, processing and sale of lanthanide Minerals and NE-REE**



Headquartered in **Kuantan, Malaysia** with its mine located in the State of Perak

**1.7**

*million tonnes*

NR-REE in Perak currently with an **estimated value of US\$**

**20.3**

*billion*

**1<sup>st</sup>**

*Malaysian Company*

**to utilized advance mining method** from China in Malaysia.

**33,000**

*tonnes*

estimated **rare earth oxide** of MCRE's explored mine area

**2,161**

*hectares*

estimated total **mining area**

### Paramount Synergy Sdn Bhd

**1,863**

*hectares*

Estimated area of identified mineralized zone

**1,200**

*holes*

drilled to date

# MCRE's strategic advantages

MCRE is a pioneer in rare earth mining in Malaysia



## MCRE's strong position



MCRE is a pioneer in rare earth mining with a large amount of rare earth deposit in Malaysia, It is the only Malaysian company that has been granted exclusive rights by Chinese strategic partners.

## Established Resources



MCRE's Mine is a producing mine with estimated rare earth oxide of around 33,000 tonnes based on its environment impact assessment report

## Low Carbon Footprint



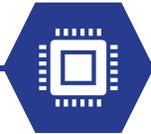
MCRE's in-situ leaching method to extract NR-REE carbonates helps preserve the natural landscape with an overall low carbon emission footprint

# MCRE's strategic advantages

MCRE is a pioneer in rare earth mining in Malaysia



## Multi-year growth prospects



REE is used across various industries like semiconductor as well as the renewable energy industries ensuring growing demand in the future

## Diversification of income



Further strengthen SAM's position as a diversified mining company to build a sustainable revenue

## Potential for greater shareholder value



Aim to contribute to the Group's performance, allowing the Group to deliver better returns to its shareholders

Scan to ask questions!



**THANK YOU!**

