

LONGONJO MAGNET METALS PROJECT



High Value Praseodymium and Neodymium
Project to Supply the Technology Sector

Huambo Province - Angola

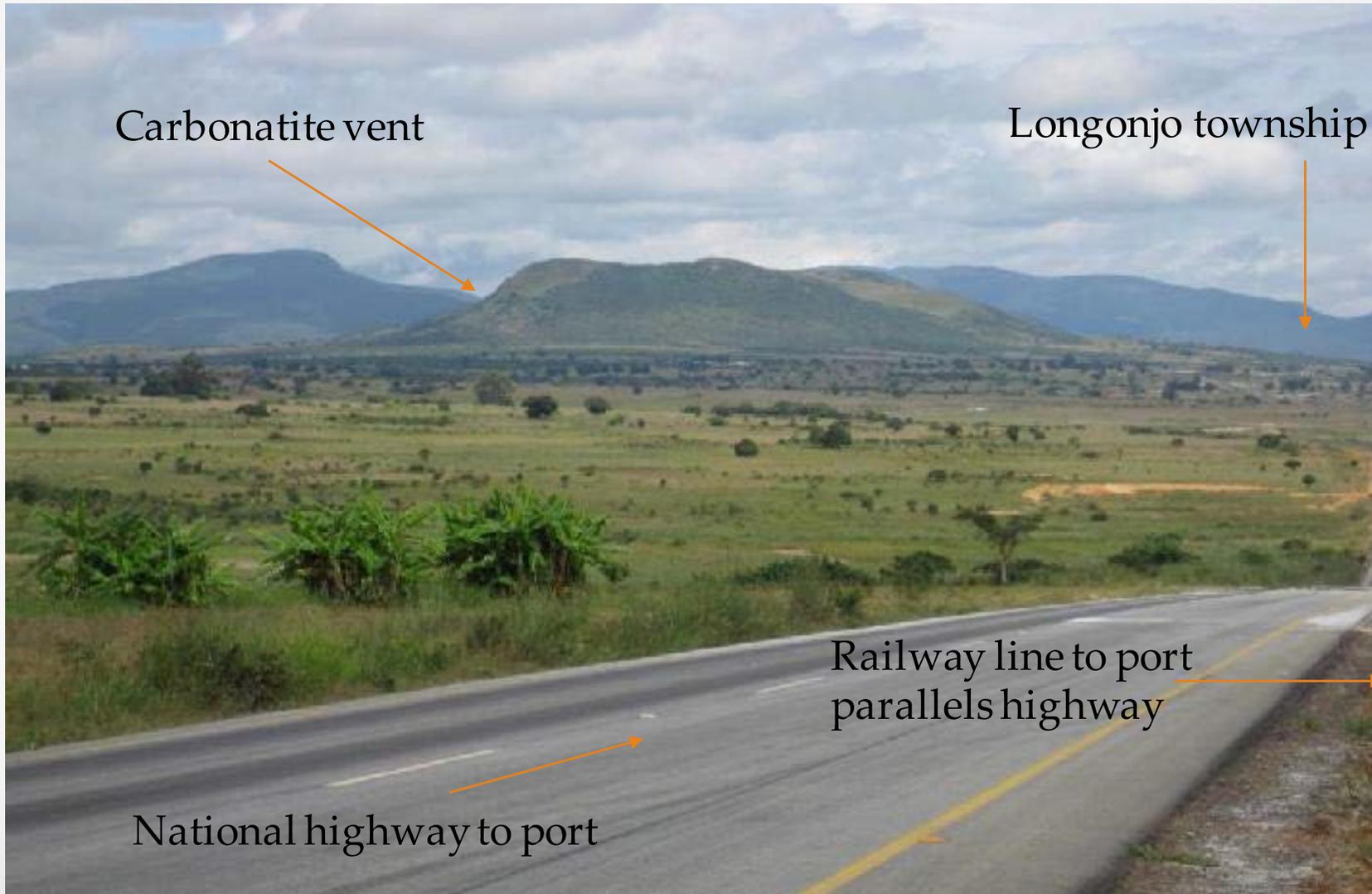


THE PROJECT

- Rift Valley 70% Equity
- Strategic Gov't Partner
- Excellent Accessibility
 - Sealed road and refurbished railroad within 4km of project
 - 60km from Angola's 2nd largest city
 - Road and rail access to port
- Infrastructure Rich
 - Low cost hydroelectric power
 - Good water availability
 - Hydroelectric Power
- Government pro-mining
- Tax Incentives Available
- Magnet Metal Demand on the Rise
- China to Reduce Production



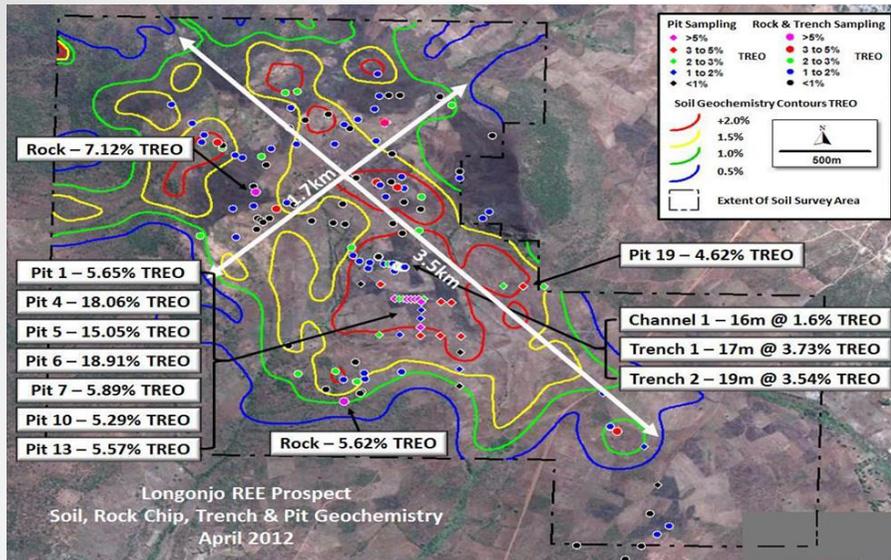
LONGONJO CARBONATITE VENT



LONGONJO RAILWAY STATION



PROJECT SUMMARY

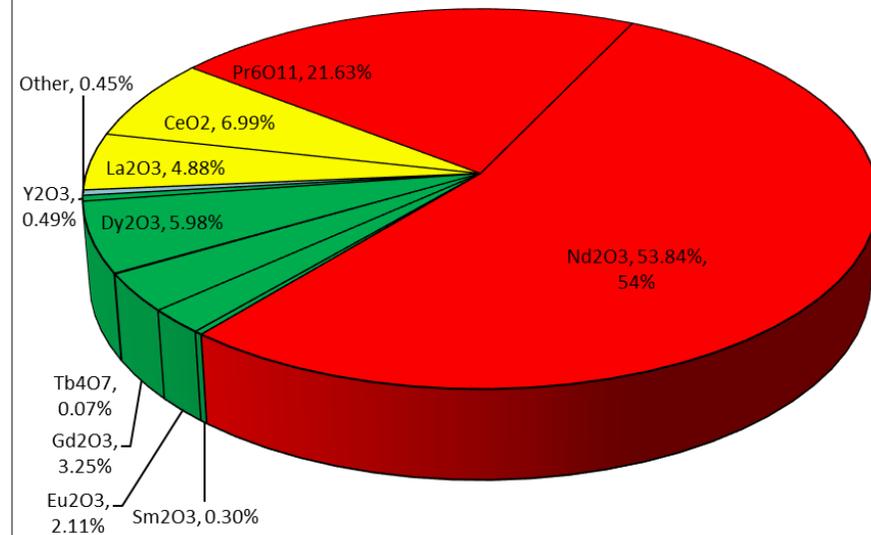


Longonjo Geochemical Anomaly

- High grade beneficiation concentrate to 19.44% TREO
- Magnet Metals Nd and Pr represent 75% in-situ value
- Proven acid bake flowsheet
- Rare earth carbonate product

- Mineralization from surface to hard rock contact – average depth – 27m demonstrated from RAB drilling
- Demonstrable geochemical anomaly over 6km² (3.5km x 1.7km)
- Monazite style mineralisation
- Low uranium and thorium
- Potential to host significant niobium mineralization

Longonjo - REO distribution by in-situ value



Valuation Source : Metals Pages - 8 November 2016

MAGNET METAL USES



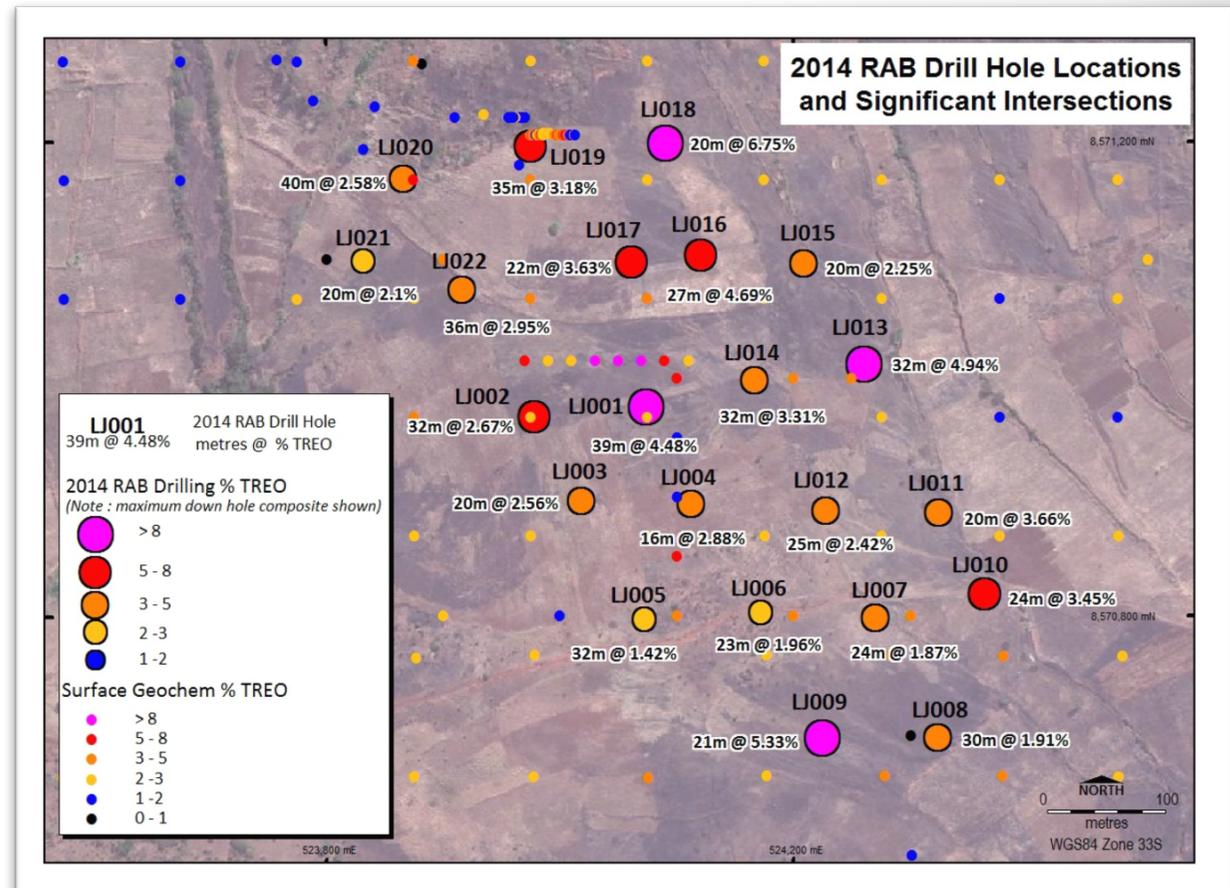
- Computer Hard Drive Magnets
- Microphones
- Headphones
- Dentures
- Loudspeakers
- Magnetic Pump Couplings
- Door Catches
- Magnetic Suspension
- Motors (e.g. washing machines, drills, food mixers, vacuum cleaners, hand dryers)
- Generators (e.g. Wind turbines, Wave Power, Turbo Generators, etc)
- Sensors
- Orthopaedics
- Halbach Arrays
- Jewellery
- Healthcare
- MRI and NMR
- Magnetic Separators
- TWT (Transverse Wave Tube)
- Magnetic Bearings
- Lifting Apparatus
- Limpet Pot Magnets
- Starter motors
- ABS systems
- Fans Eddy Current
- Brakes
- Alternators
- Meters
- Magnetic Clamps
- Magnetic Levitation
- Electro-acoustic pick-ups
- Switches
- Relays

Growing Demand
Increasing Application

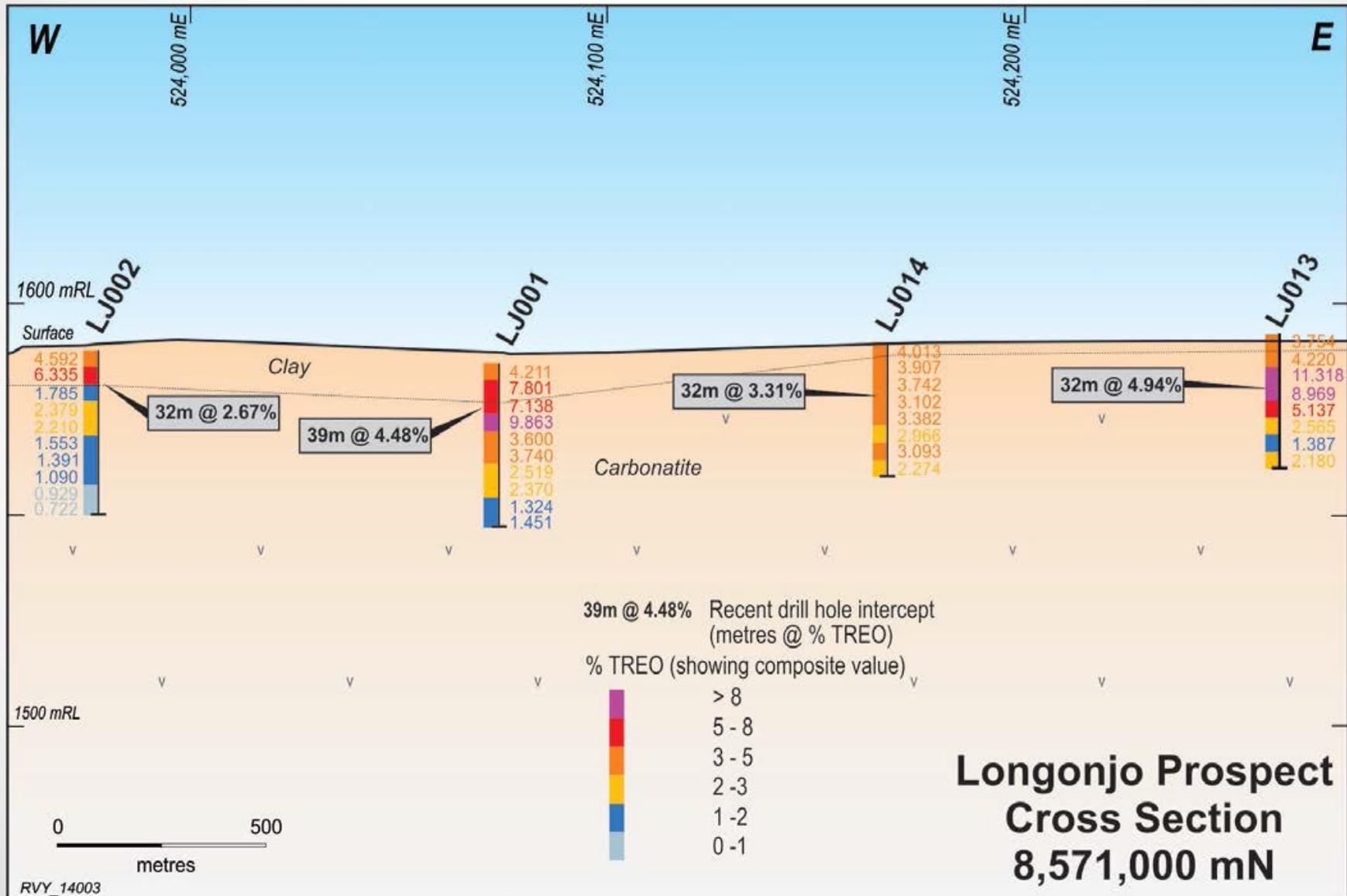


EXPLORATION CONDUCTED

- Geochem sampling over 3.5 x 1.7km anomaly
- RAB Drilling over 600m x 500m (ASX 31.4.2014)
- Broad mineralized intercepts from surface
 - 39m @ 4.48% TREO
 - 21m @ 5.33% TREO
 - 32m @ 4.94% TREO
 - 20m @ 6.75% TREO
- 4m composite assays up to 11.32% TREO
- Mineralization open in all directions over the 6km² Geochemical Anomaly
- 60kg Bulk Sample from trenching used for beneficiation and hydrometallurgy testwork



LONGONJO DRILLING CROSS SECTION



DESKTOP STUDY SUMMARY

- Testwork and study managed by rare earth specialist Mr Gavin Beer
- ROM ore beneficiated to high grade concentrate
- Acid Bake route demonstrated and recommended
- 89% recovery of Nd/Pr (“Magnet Metals”) via Acid Bake route
- Overall metallurgical flowsheet is industry proven
- Nd/Pr represents 75% in-situ value
- Equipment and production facility list established
- Capital Expenditure requirements well advanced
- Financial model underway
- 7 Year ROM JORC resource drilling programme planned

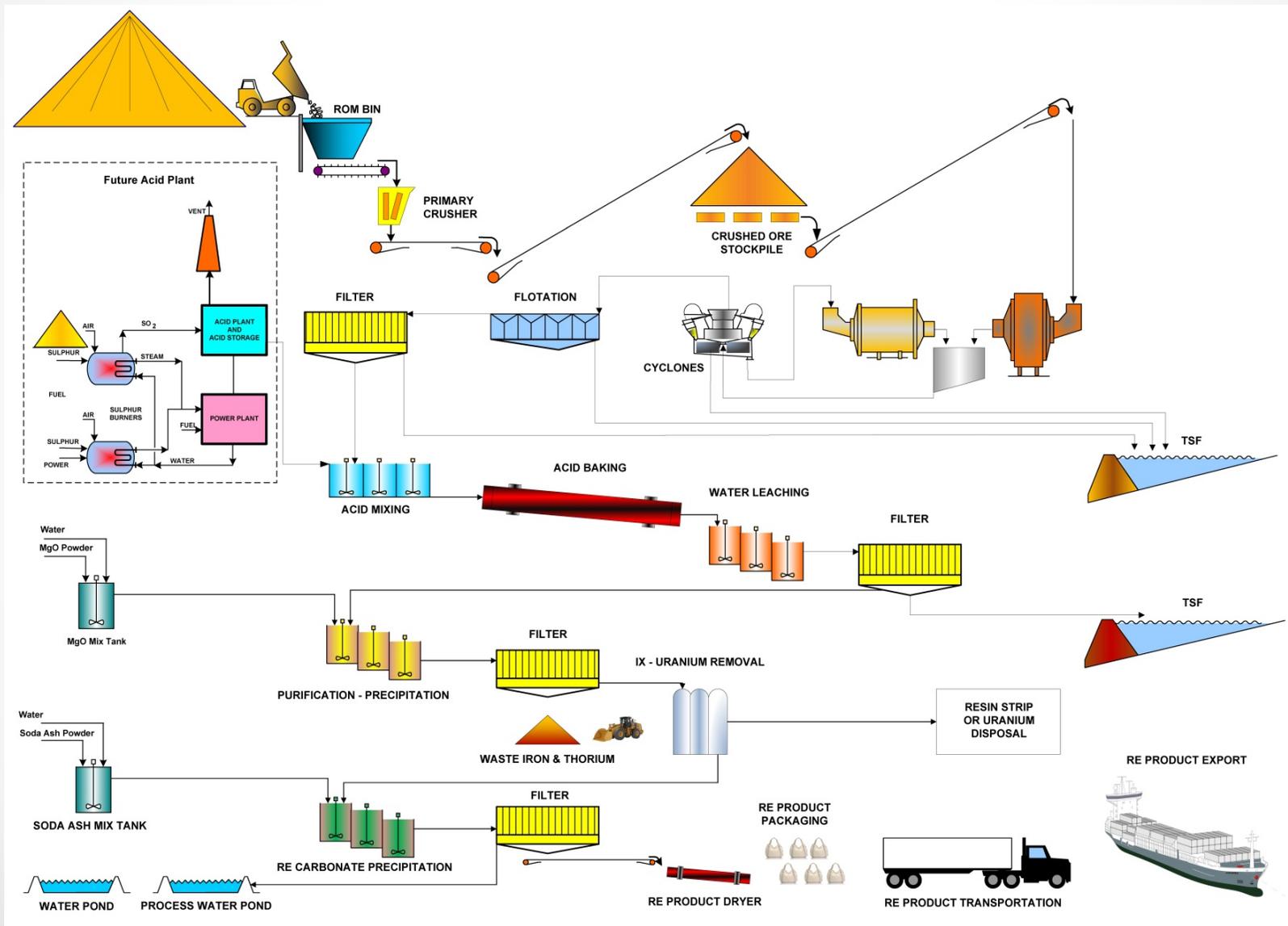
	Leach Dissolution						
	REO (%)	CeO ₂ (%)	Nd ₂ O ₃ (%)	Pr ₆ O ₁₁ (%)	Fe ₂ O ₃ (%)	U ₃ O ₈ (%)	ThO ₂ (%)
Acid Bake Route	83.7	77.5	89.1	89.0	14.7	45.0	39.5
Caustic Conversion Route	64.1	27.5	90.1	90.0	76.4	70.2	56.8

POSITIVE METALLURGY

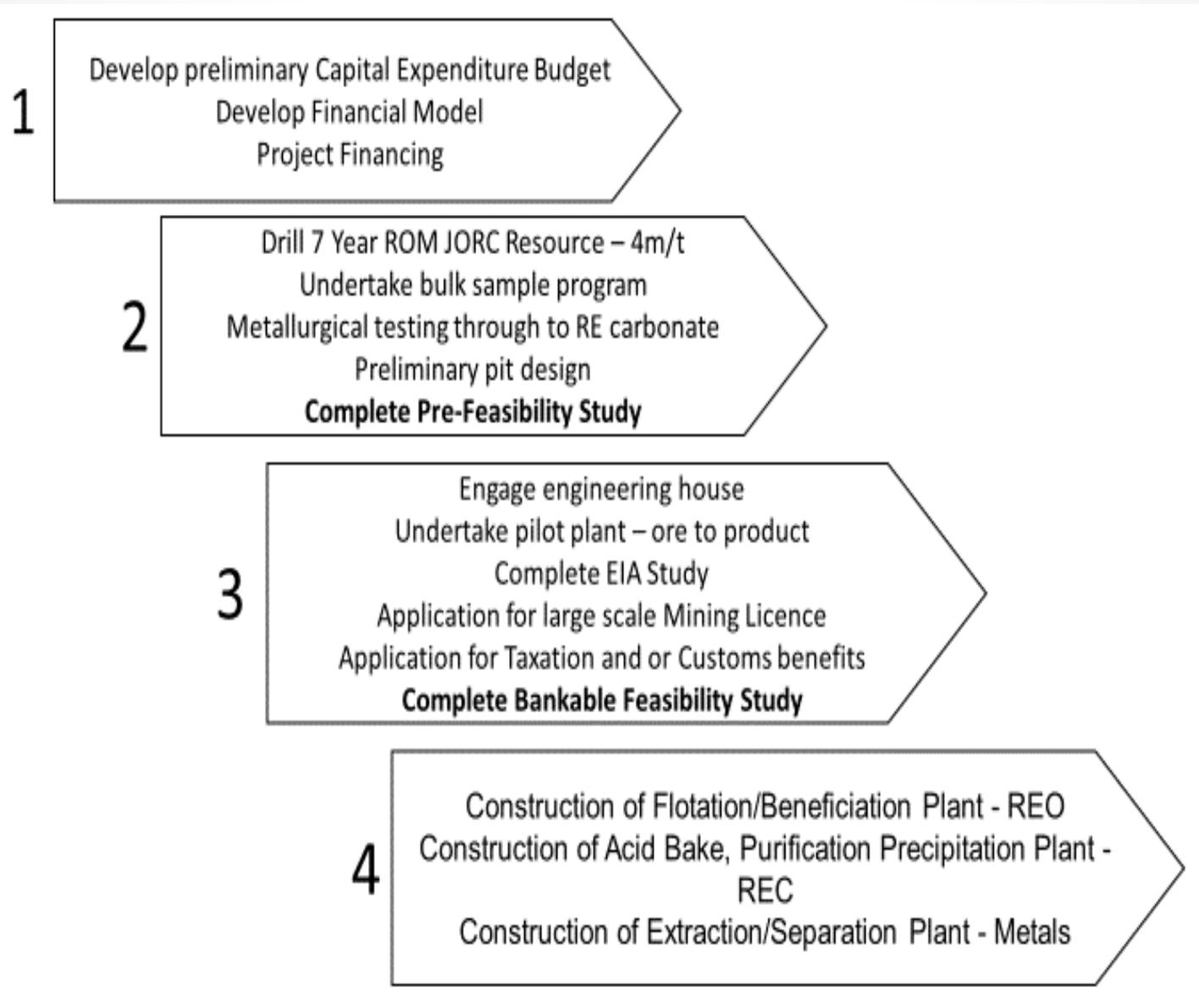
- Preliminary beneficiation testwork produced grades up to 19.44% REO into a low mass flotation concentrate
- Acid bake flowsheet is a standard industry practice used by Lynas and planned for Arafura Resources, Northern Minerals and Hastings Technology Metals
- Acid Bake and Leach process recovers 89% of the high value magnet metals (Nd & Pr) from the flotation concentrate
- Rare Earth Carbonate (REC) product preferred feed to 3rd party separation facilities



2 STAGE PRODUCTION FLOWCHART



MOVING FORWARD



PROJECT SUMMARY

- Potential World Class Magnet Metal Project
- Utilises proven flowsheet of acid baking
- Great Infrastructure
 - Local road & rail
 - Deep water port access
 - Cheap hydroelectric power
 - Plentiful water supply
- Strategic Government Partner
- Tax and Customs Incentives Available for Negotiation
 - Reduce Payback Period
 - Enhance Revenue Stream
- Estimated Capex and Financial Model Advanced
- 7 Year ROM JORC Resources drilling planned



RARE EARTH COMPANY COMPARISONS

Company	Ex	Code	Mkt Cap \$m	Project	Country	Status
Peak Resources	ASX	PEK	31.5	Ngualla	Tanzania	Feas
Arafura Resources	ASX	ARU	26.9	Nolans Bore	Australia	Feas
Hastings Technology Metals	ASX	HAS	42.0	Yangibana	Australia	Pre-Feas
Lynas Corporation	ASX	LYC	223.2	Mt Weld	Australia	Production
Northern Minerals	ASX	NTU	71.2	Browns Range	Australia	Pre-Feas
Rift Valley Resources	ASX	RVY	12.8	Longonjo	Angola	Exploration

Market Capitalisation as at 2 December 2016

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SIGNIFICANT DRILL INTERCEPTS

LONGONJO PROJECT RAB DRILLING SIGNIFICANT INTERSECTIONS							
Hole ID	EASTING	NORTHING	RL	Depth From (m)	Depth To (m)	Width (m)	TREO (%)
LJ001	524074	8570978	1567	0	39	39	4.48
LJ002	523978	8570970	1573	0	32	32	2.67
LJ003	524019	8570898	1588	0	20	20	2.56
LJ004	524113	8570896	1573	0	16	16	2.88
LJ005	524072	8570798	1569	0	32	32	1.42
LJ006	524172	8570804	1562	0	23	23	1.96
LJ007	524270	8570800	1563	0	24	24	1.87
LJ008	524323	8570700	1554	0	30	30	1.91
LJ009	524225	8570700	1557	0	21	21	5.33
LJ010	524362	8570820	1563	0	24	24	3.45
LJ011	524324	8570888	1564	0	20	20	3.66
LJ012	524228	8570890	1569	0	25	25	2.42
LJ013	524260	8571014	1577	0	32	32	4.94
LJ014	524167	8571000	1575	0	32	32	3.31
LJ015	524209	8571098	1582	0	20	20	2.25
LJ016	524121	8571106	1586	0	27	27	4.69
LJ017	524062	8571100	1590	0	22	22	3.63
LJ018	524091	8571200	1604	0	20	20	6.75
LJ019	523975	8571198	1593	0	35	35	3.18
LJ020	523866	8571170	1584	0	40	40	2.58
LJ021	523832	8571100	1567	0	20	20	2.10
LJ021	523832	8571100	1547	28	32	4	1.51
LJ022	523917	8571076	1573	0	36	36	2.95

Table 1

*Note: Results are derived from 4 metre composite samples
Intersections calculated using a 1% lower cut, no upper cut and no internal dilution.*