



# PHOSPHATE RESOURCE DEVELOPMENT AND COPPER/GOLD EXPLORATION SOUTHERN BRAZIL

November 2018

AGUIA Resources Limited

ASX: AGR | TSXV: AGRL

# DISCLAIMER

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# AGUIA: A Brazilian Resource Company



## Derisked phosphate project advancing towards production

- Simple open pit with infrastructure in place; rail, road, power, town, regional fertiliser blenders
- Approval of Environmental Impact Assessment and granting of Preliminary License (LP) is next major milestone
- Mineral Resource supports min 16 year life + additional 20 years of aglime production
- BFS included only 44MT in the base case
- Significant logistics cost advantage and low CAPEX of ~ US\$84M (including US\$8M contingency)
- Production of 300,000 tpa phosrock and 1,000,000 tpa aglime supplied to local agriculture market 100% import reliant

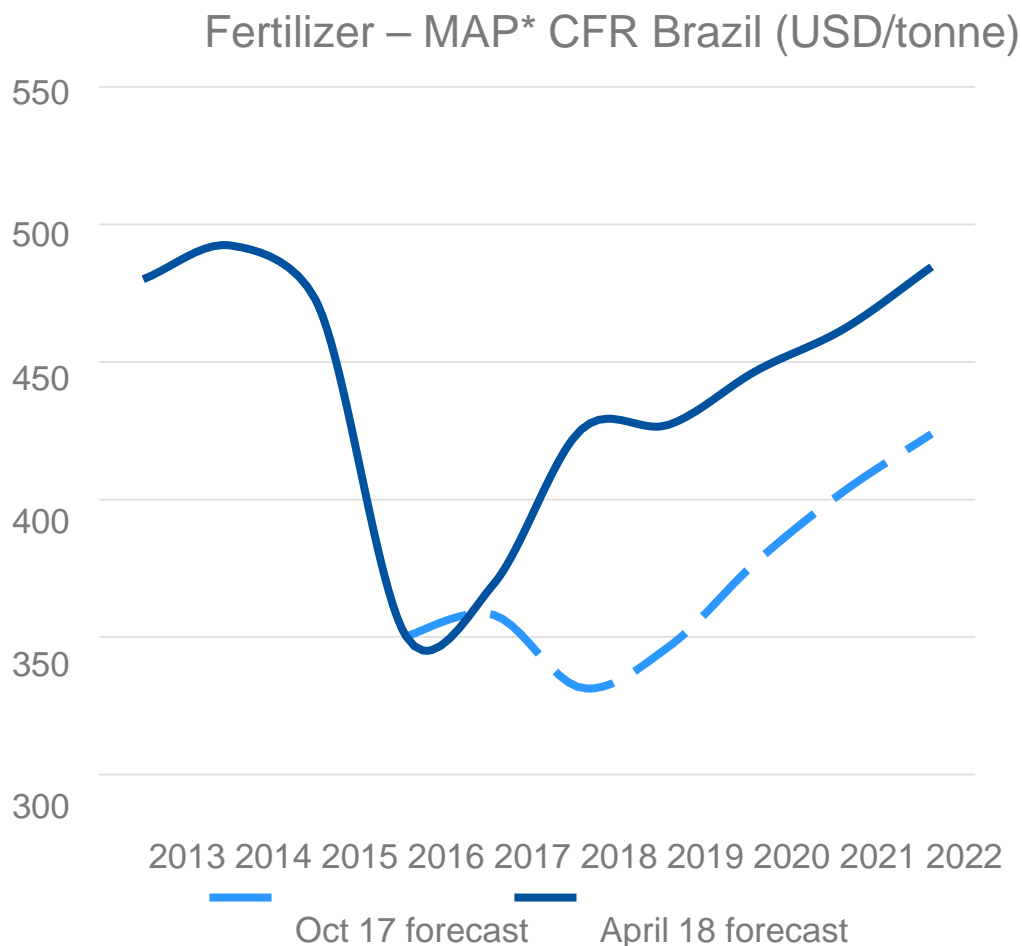


## New copper discoveries

- Two extensive zones; **Canhada** (9km x 3km); **Big Ranch** (8km x 4km) of mineralization proximal to past production in Camaqua Copper Belt
- Drill campaign underway



# Phosphate Forecast More Optimistic



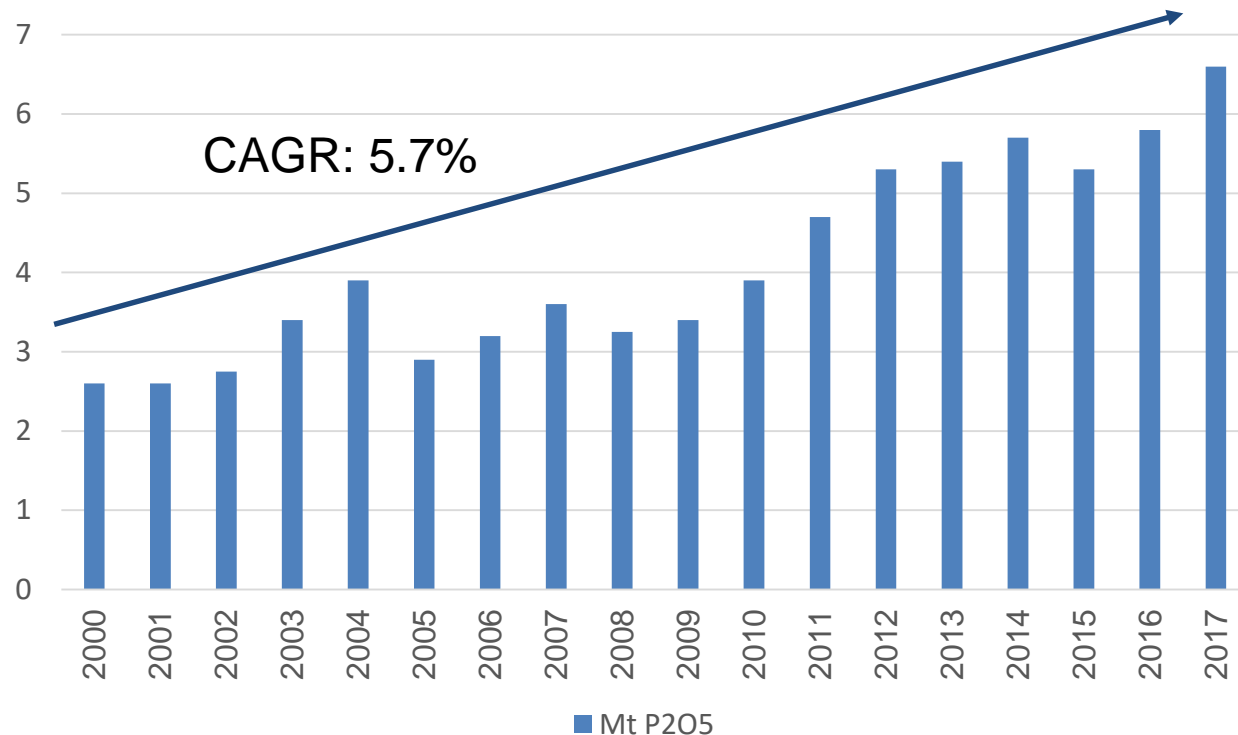
\*MAP - Monoammonium phosphate, common form of phosphate fertilizer

- Strong, less volatile demand for phosphate globally, a slowdown in new capacity into 2022 and supply adjustments (i.e. idling of Mosaic's Plant City in Dec. 2017) are creating tighter market conditions
- Forward looking pricing for MAP has improved substantially in 6 months
- New environmental regulations in China have led to closures and relocations of small and mid-tier producers while a new environmental tax has increased costs
  - China provides the market with its marginal tonnes so escalation of Chinese production costs provides a price floor

# Brazil Outpaces Global Demand Growth



## Brazilian Phosphate Demand



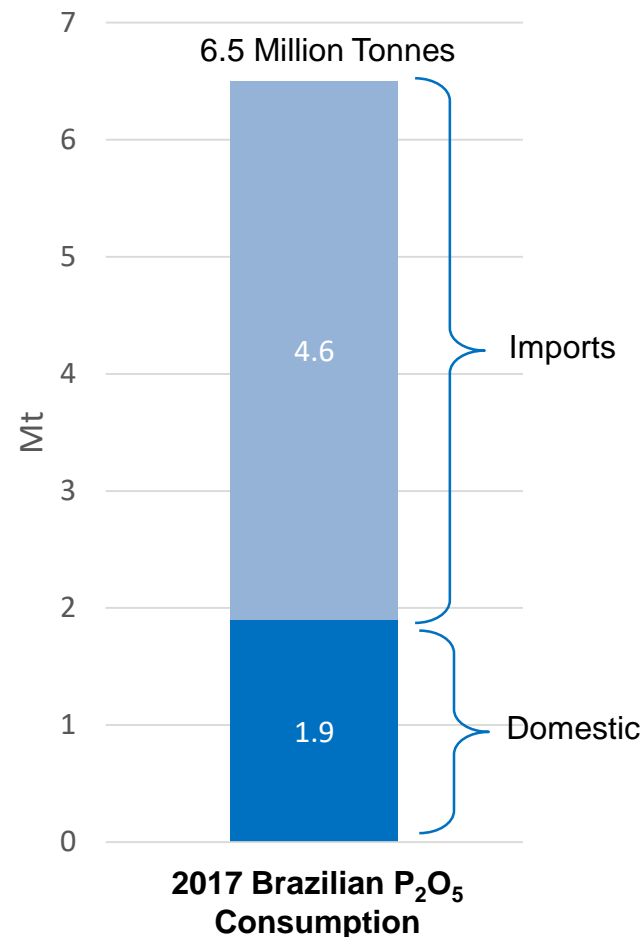
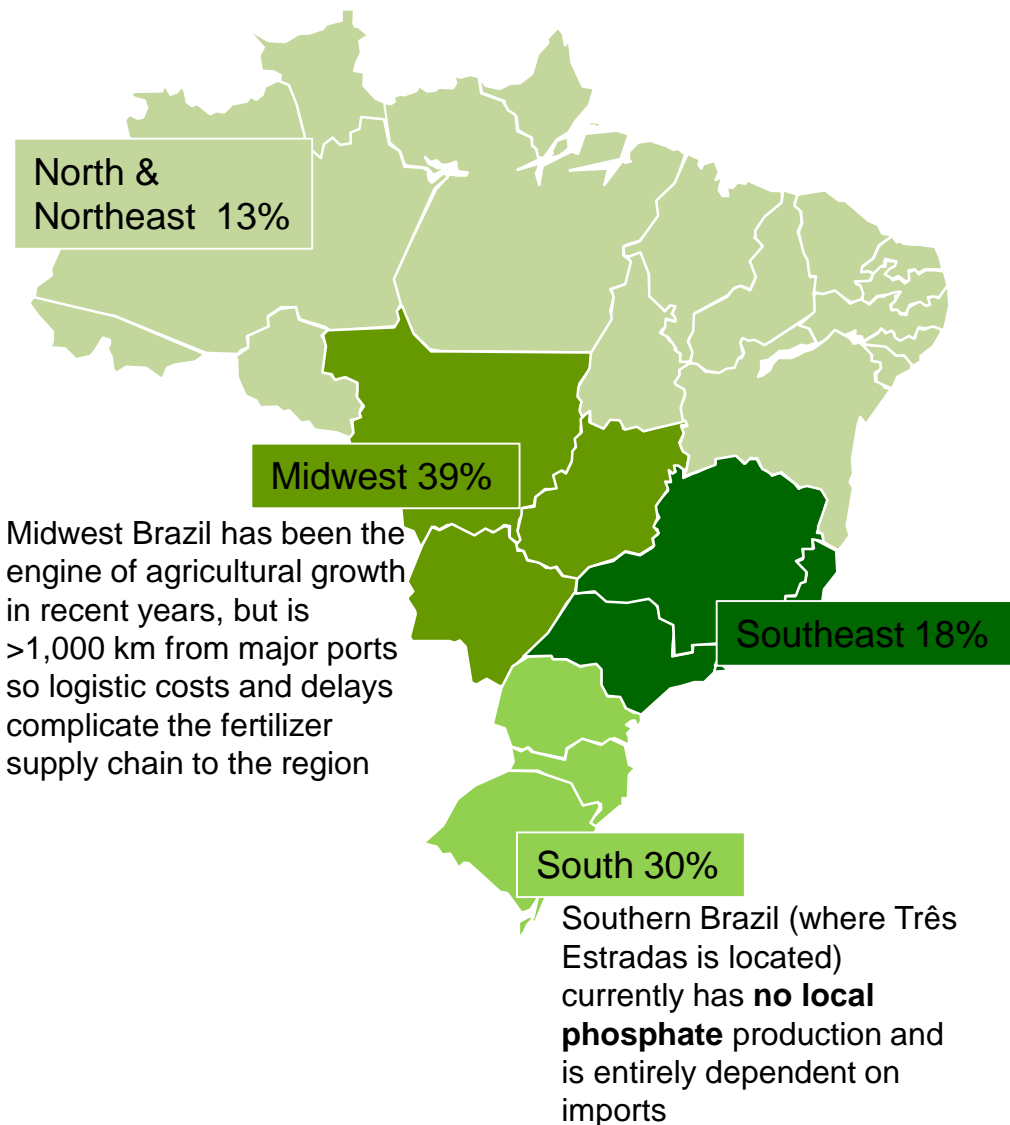
- Brazil is a key driver for global phosphate growth
- Demand up >2x since 2000
- Due to increased;
  - Harvested land area
  - Fertilizer application rates

- Key success factors for Brazilian producers will include:
  - Freight advantage into local growth markets
  - Competitive operating costs
  - Sound market strategy



**Improved outlook  
for new Brazilian  
projects**

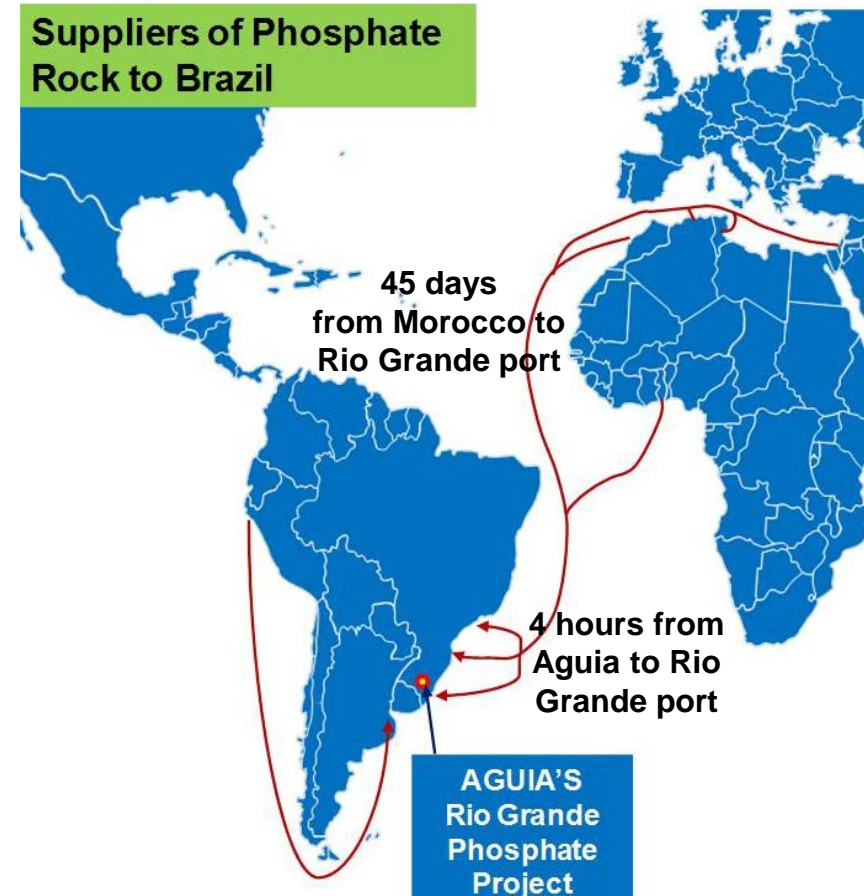
# Brazil Phosphate Demand by Region



# Domestic Producer Cost Advantage



- Southern Brazil is 100% reliant on phosphate imports with no new mines planned or under development
- **Agua has a sustained cost advantage**
- Southern Brazil currently consumes 1.8 Mt of phosphate imports annually<sup>1</sup>
- Agua's production of 300,000 tpa will displace ~60% of phosphate imports in Rio Grande do Sul
- Timac and Yara are the major SSP producers at Rio Grande port (4 hours away) with combined capacity of 1.1 Mt per annum of fertilizer production
- Established aglime market provides secondary revenue stream for a calcite by-product



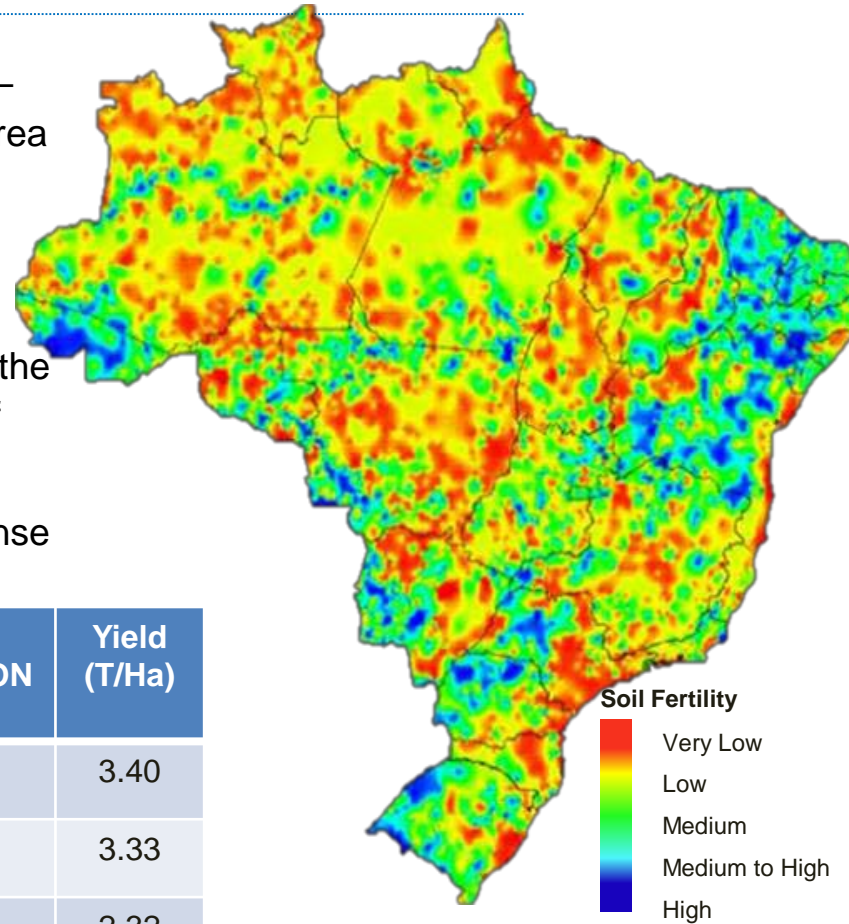
<sup>1</sup>Source: Agroconsult, ANDA 2017

# Brazil's Soil Requires lots of Nutrients



## Soybean Case Study - 2017/2018 Statistics

- Increased soybean production driving phosphate demand – since 2000 CAGR 7% with yields up 31% and harvested area up 69%
- In 2018/19, Brazil expected to overtake US as biggest soybean producer
- Record harvests remove record amounts of nutrients from the soil which have to be replaced through direct application of fertilizers
- China is increasing imports of Brazilian soybeans in response to US tariffs – shipments from Brazil are up 5% YTD



COUNTRY	AREA (Mil Ha)	PRODUCTION (MT)	NPK (MT)	NPK APPLICATION (Kg/Ha)	Yield (T/Ha)
Brazil	35	120	5.60	160	3.40
USA	36	120	2.11	60	3.33
Argentina	17	38	.27	14	2.32
China	7.9	14	.50	60	1.81
World	119	337	9.74	82	2.72
World ex-Brazil	84	217	4.14	49	2.58

Surprisingly, Brazil's soil is not particularly fertile throughout most of the country. Nevertheless, Brazil has become an agricultural powerhouse through the use of technology, science, modern farming methods and **extensive use of fertilizers** to improve yields.



A close-up photograph of phosphate rock, showing various shades of brown, tan, and greenish-blue mineral deposits on a rough, crystalline surface.

# TRÊS ESTRADA PHOSPHATE PROJECT

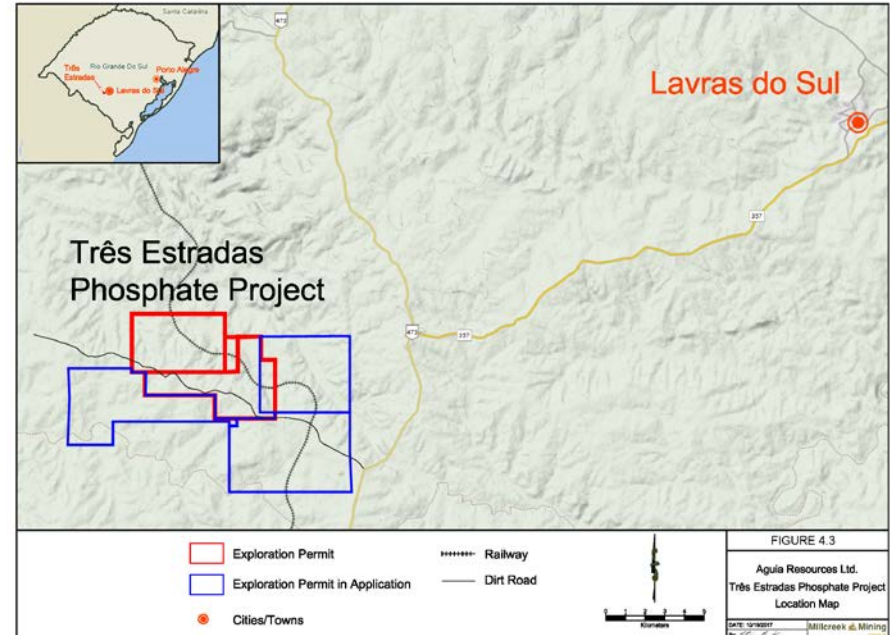
# Três Estradas Summary



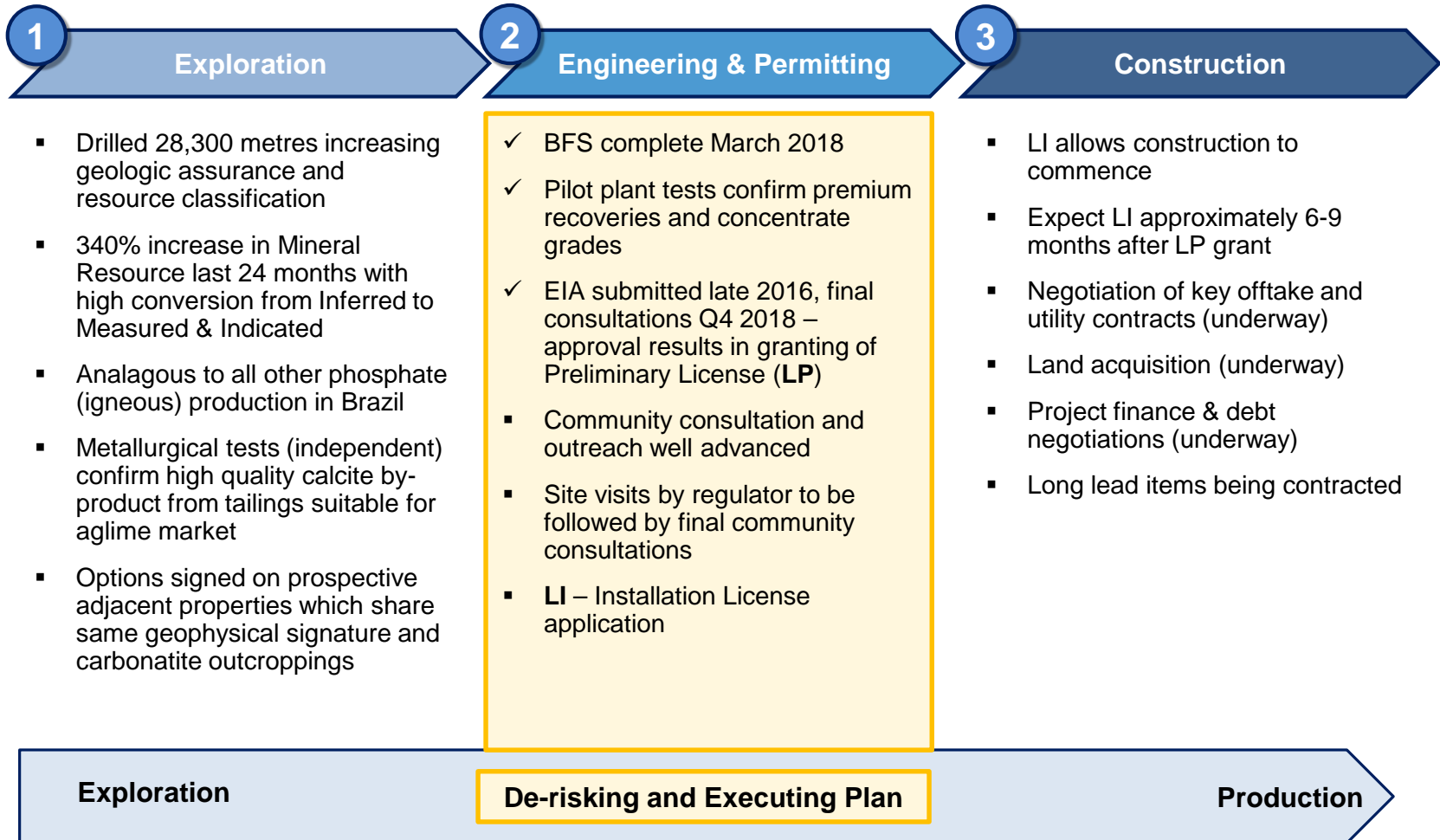
- Located in southern Brazil in the State of Rio Grande Du Sol
- Open pit phosphate project, BFS completed March 2018, now awaiting permitting
- Phosphate present in rock as  $P_2O_5$  and will be concentrated for sale as “rock phosphate” to fertiliser plants.
- Low CAPEX, existing infrastructure; road, rail, power, port, fertiliser plants, town
- Low operating costs
- Potential to add to resource base and mine life through exploration of adjacent and nearby claims
- Derisked (exploration completed, at permitting stage)
- Experienced team

Total LOM (16 years phosrock mining plus 20 years aglime sales):

- Gross revenue US\$1.65 billion
- EBITDA US\$1.08 billion
- Free cashflow US\$850 million



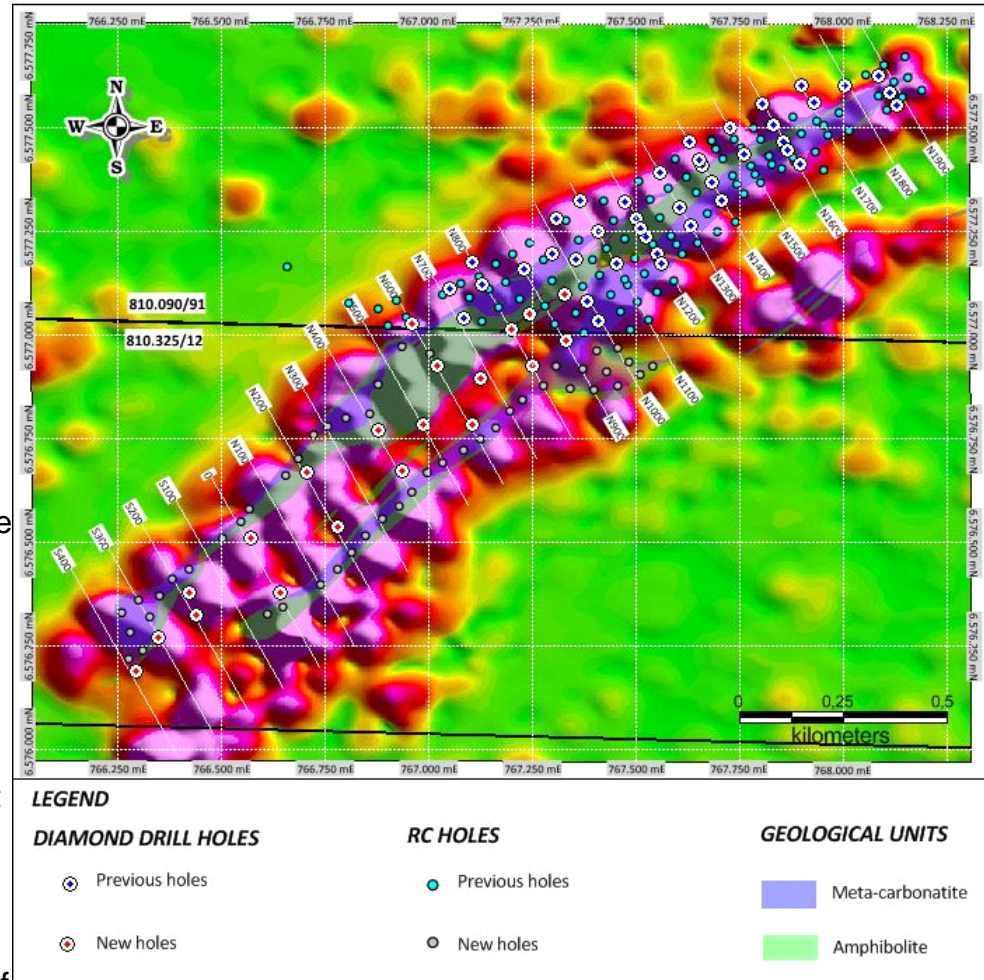
# On the Pathway to Production



# Três Estradas Phosphate Resource



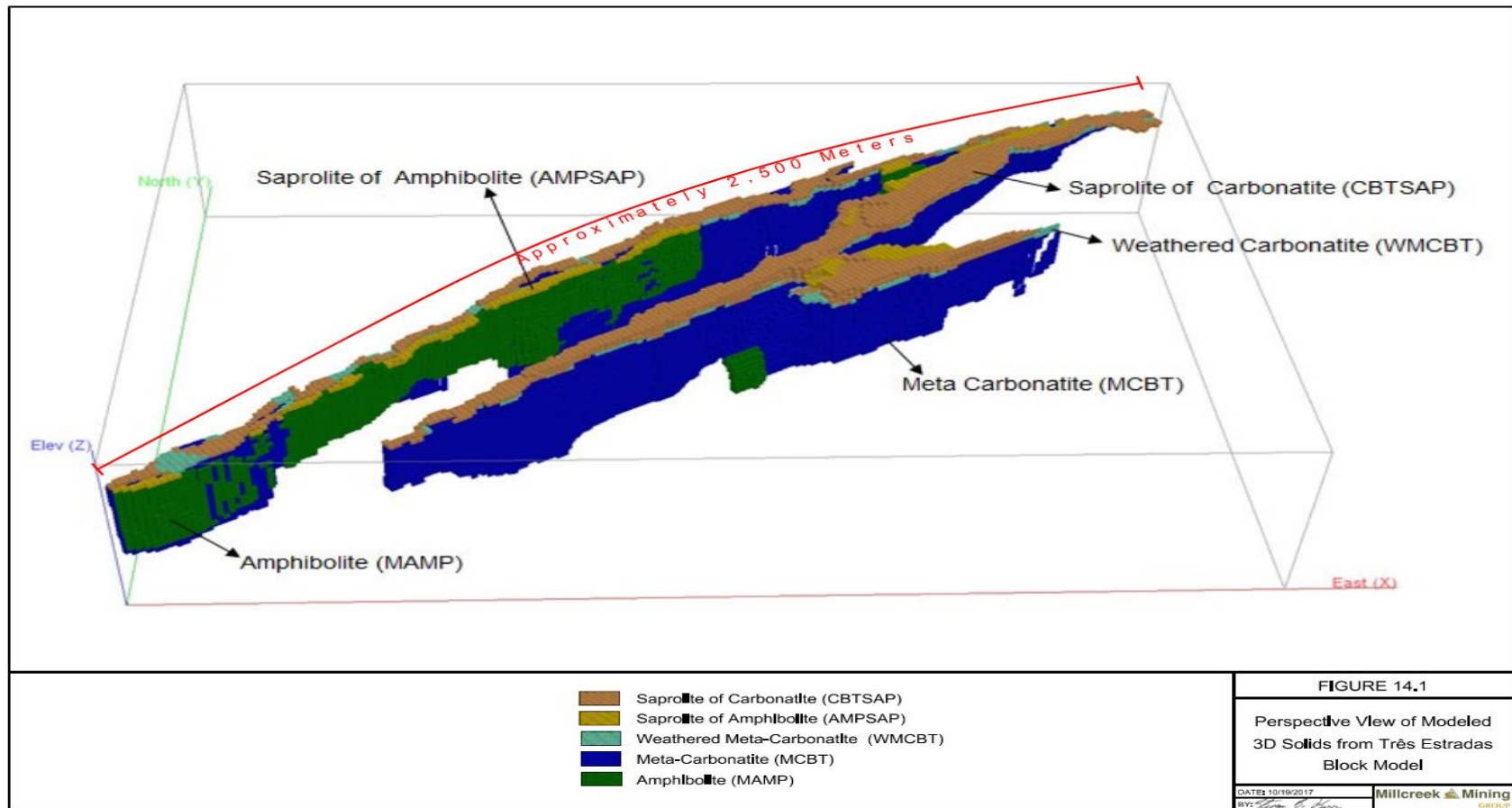
- **JORC/43-101 compliant resource**
  - 36 Mt Measured @ 4.01% P<sub>2</sub>O<sub>5</sub>
  - 47 Mt Indicated @ 4.18% P<sub>2</sub>O<sub>5</sub>
  - 21.8 Mt Inferred @ 3.67% P<sub>2</sub>O<sub>5</sub><sup>1</sup>
- 28,300 meters of drilling now complete
  - Pilot plant scale flotation test results confirm excellent recoveries and concentrate grades for industrial scale<sup>2</sup>:
    - ✓ **Oxide mineralization** produced concentrate grading 35% P<sub>2</sub>O<sub>5</sub> yielding total circuit recovery of 87% (BFS<sup>2</sup> – 81.4% recovery at concentrate grade of 32.7% P<sub>2</sub>O<sub>5</sub>)
    - ✓ **Fresh carbonatite** produced concentrate grading 32% P<sub>2</sub>O<sub>5</sub> yielding total circuit recovery of 80% (BFS<sup>2</sup> - 75.3% recovery at concentrate grade of 30.1% P<sub>2</sub>O<sub>5</sub>)
  - From the rougher tailings of the phosphate flotation, a high quality calcite concentrate grading 48.55% CaO was produced with a CaO recovery of 83.1% with 100% reactivity
  - Sales of residual aglime (calcite) stored in waste dams will continue for decades after phosphate production ceases



<sup>1</sup> See ASX Release of 20<sup>th</sup> September 2017, <sup>2</sup> ASX Release of 5<sup>th</sup> October, 2017

# High-Grade Oxide Ore At Surface

- First 4-5 years of production will focus on shallow high-grade oxide (saprolite) in the first 25 to 30 meters from surface
- Measured and Indicated resource of oxidized material occurring of 5.3 million tonnes grading 8.8%  $P_2O_5$  with a cut-off grade of 3%  $P_2O_5$



# BFS Confirms Robust Economics



- Bankable Feasibility Study for the Três Estradas Project demonstrates the technical and economic viability of the project as a low cost producer of phosrock and calcite
- Existing infrastructure and proximity to market decrease construction costs and provide a competitive selling advantage over imports

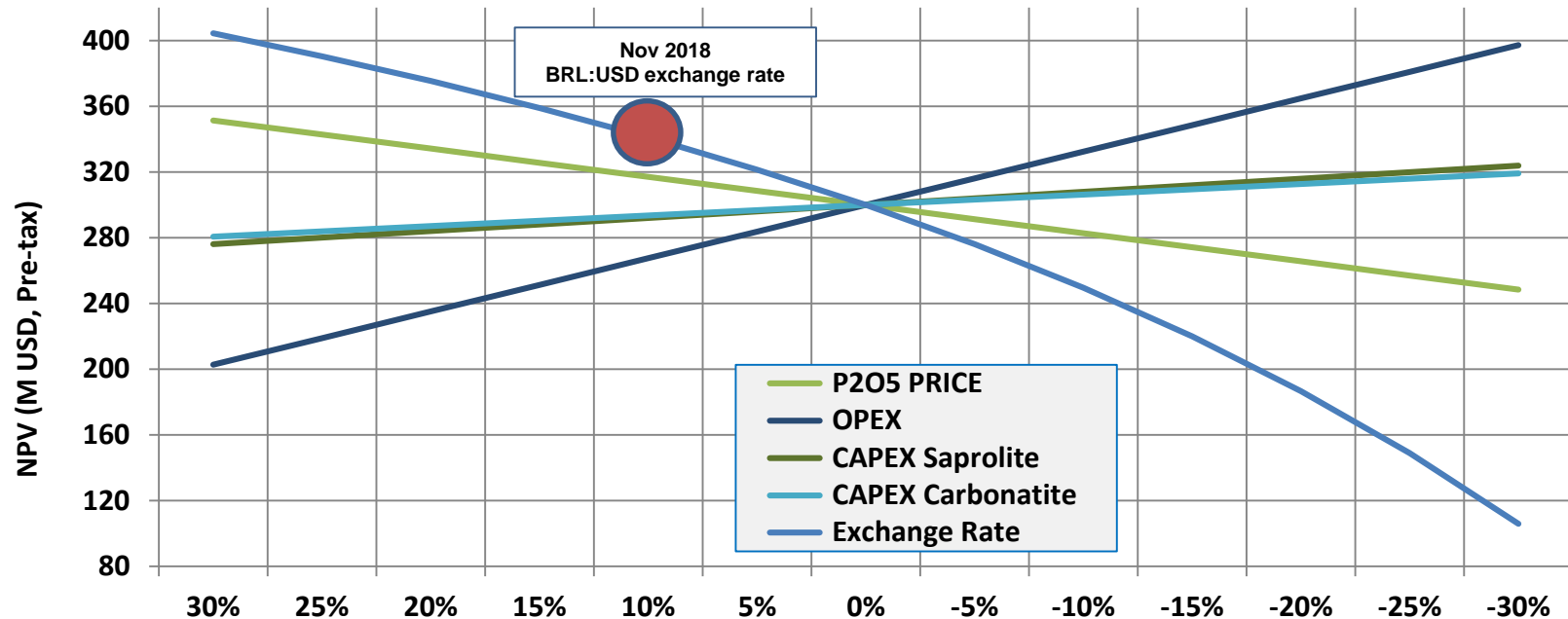
Key Results	BFS
NPV (5% Discount Rate)	Pre-Tax: US\$300 million/A\$415 million   Post-Tax: US\$212 million/A\$293 million
IRR	21% pre-tax   18% post-tax
Production Rate	300,000 tonnes per year phosphate concentrate 1 million tonnes per year aglime
Initial Capital Expenditure	US\$75.6 million <u>+ US\$8.3 million contingency</u> US\$84 million
OPEX	Phase 1: US\$51/tonne of phosphate concentrate Phase 2: US\$77/tonne phosphate concentrate + US\$5/tonne aglime Phase 3: US\$2/tonne aglime
EBITDA	Phase 1 (Saprolite): US\$28 million per annum Phase 2 (Carbonatite): US\$37 million per annum Phase 3 (Aglime): US\$26 million per annum
Strip Ratio:	1.6:1 (waste to phosphate)
ROM	43.5 million tonnes

Note: The Bankable Feasibility Study for the Três Estradas Phosphate Project, was authored by Mr. Steven B. Kerr, C.P.G., Principal Consultant – Geology, Millcreek Mining Group, Mr. Rainer Stephenson, MMSA-QP, Principal Engineer, Millcreek Engineering and Mr. Alister D. Horn, MMSA-QP, Principal Consultant, Mining, Millcreek Mining Group, each of whom are independent “qualified persons” as defined by National Instrument 43-101.

# Sensitivity Analysis



## Sensitivity for Pre-tax, Unlevered NPV @5%



- Três Estradas BFS released in lowest pricing environment in years still demonstrated positive economic returns
- Sensitivity analysis shows phosphate pricing and foreign exchange are the two components that have the biggest impact on NPV and IRR
- BFS foreign exchange assumption BRL:USD = 3.45:1, as at November 2018 BRL:USD = 3.8:1

# Community and Government Outreach

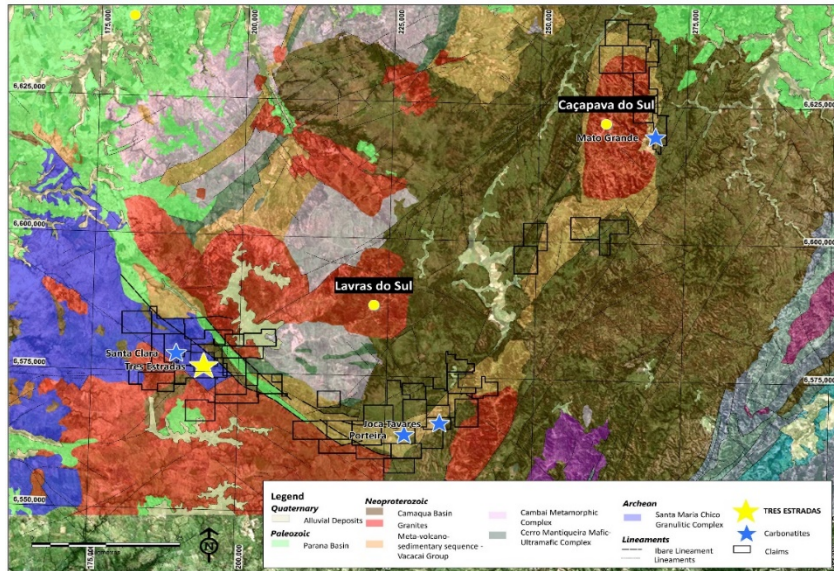


- Named a priority development project by the Secretary of Economic Development of the Rio Grande do Sul State
- Local outreach website launched for Três Estradas project providing information on development plans and positive impact on community – [www.projetofofato.com.br](http://www.projetofofato.com.br)
- Workshops and social events attended by over 1,000 people, including; key representatives from local government and community & business leaders
- New office in nearby town of Lavras do Sul
- Over 25 consultations to date (as part of EIA)
- Approaching final hearings as part of LP (Preliminary License)



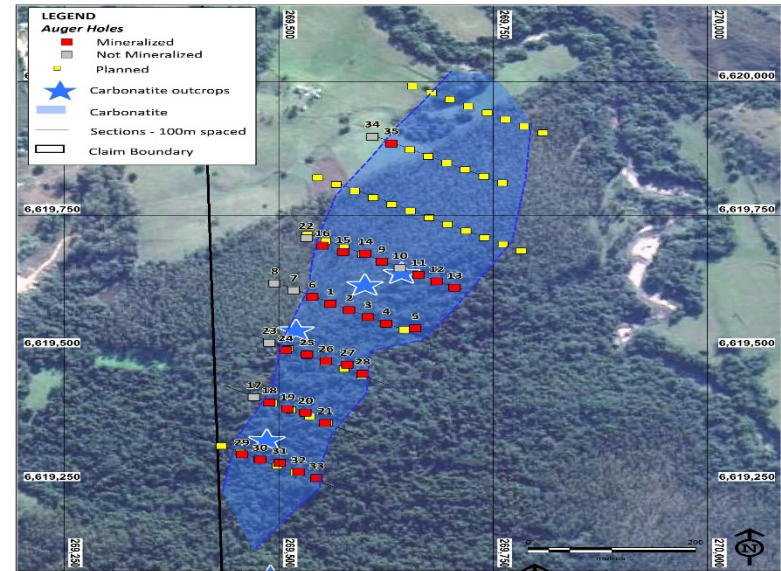


# Rio Grande Do Sul Belt Consolidation



Regional geological map highlighting the Três Estradas and Joca Tavares carbonatites and the exploration targets: Santa Clara, Mato Grande, Porteira and Santa Ines.

- Adjacent targets being explored in an effort to expand the regional resource
- Option signed on 4,500 ha **Terra Santa** located adjacent to Três Estradas, expanding footprint by 30%<sup>1</sup>
- Option signed on 3,553 ha **Santa Clara** which includes 2km long geophysical anomaly with the same pattern as Três Estradas<sup>2</sup>

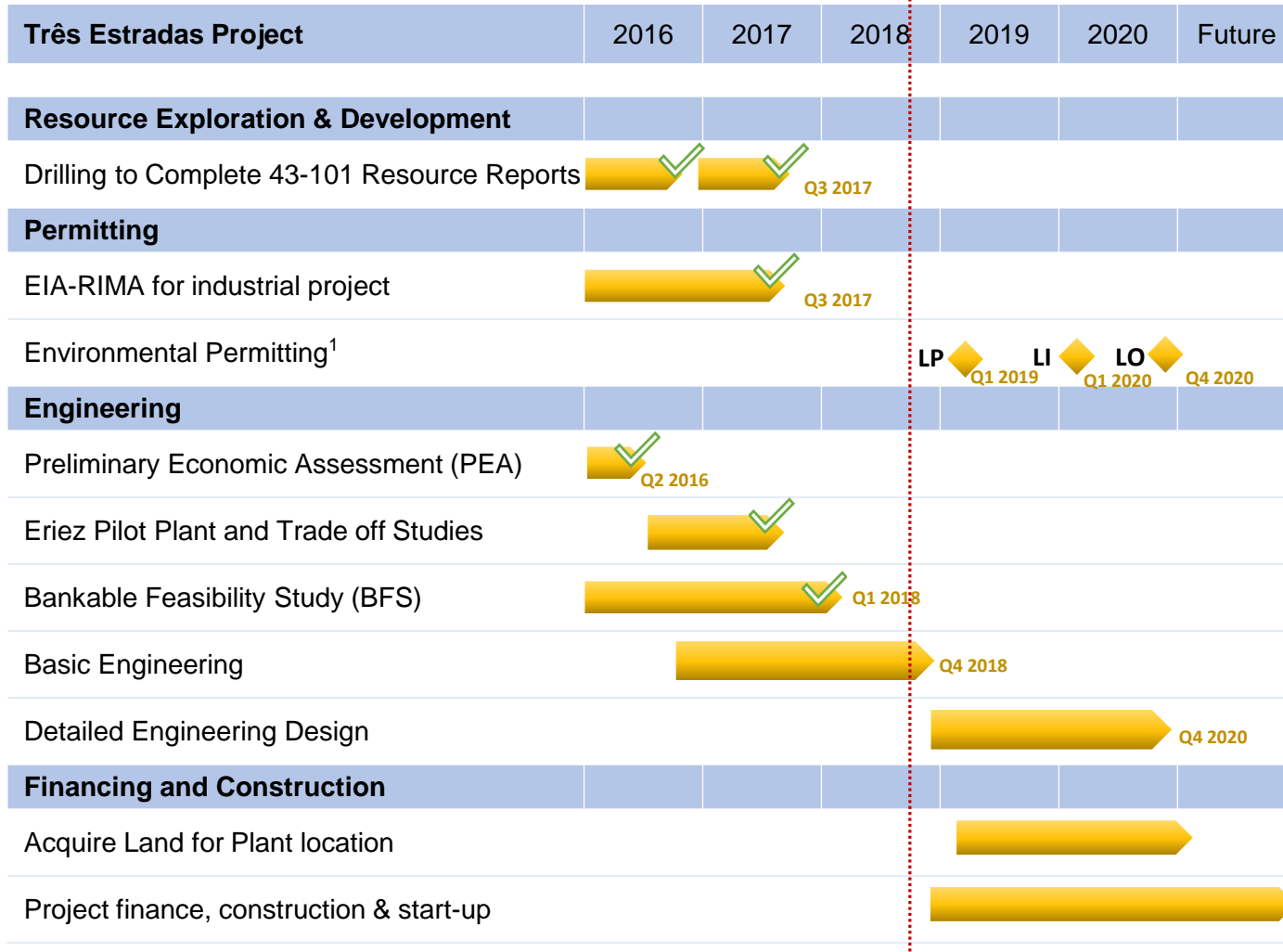


Satellite Image of the Mato Grande Carbonatite highlighting the auger drilling program that is currently in progress with results outlining the intrusion.

- **Mato Grande** carbonatite 700m long x 200m wide similar structural setting to Três Estradas
- 35 auger holes completed with 28 encountering phosphate mineralization
- Initial auger results indicate oxidized zone mineralised from surface with samples grading 11.71%  $P_2O_5$ <sup>3</sup>

<sup>1</sup>See ASX release 9<sup>th</sup> December 2015, <sup>2</sup>See ASX release 8<sup>th</sup> June 2016, <sup>3</sup>See ASX release 16<sup>th</sup> January 2018

# Timeline and Key Milestones

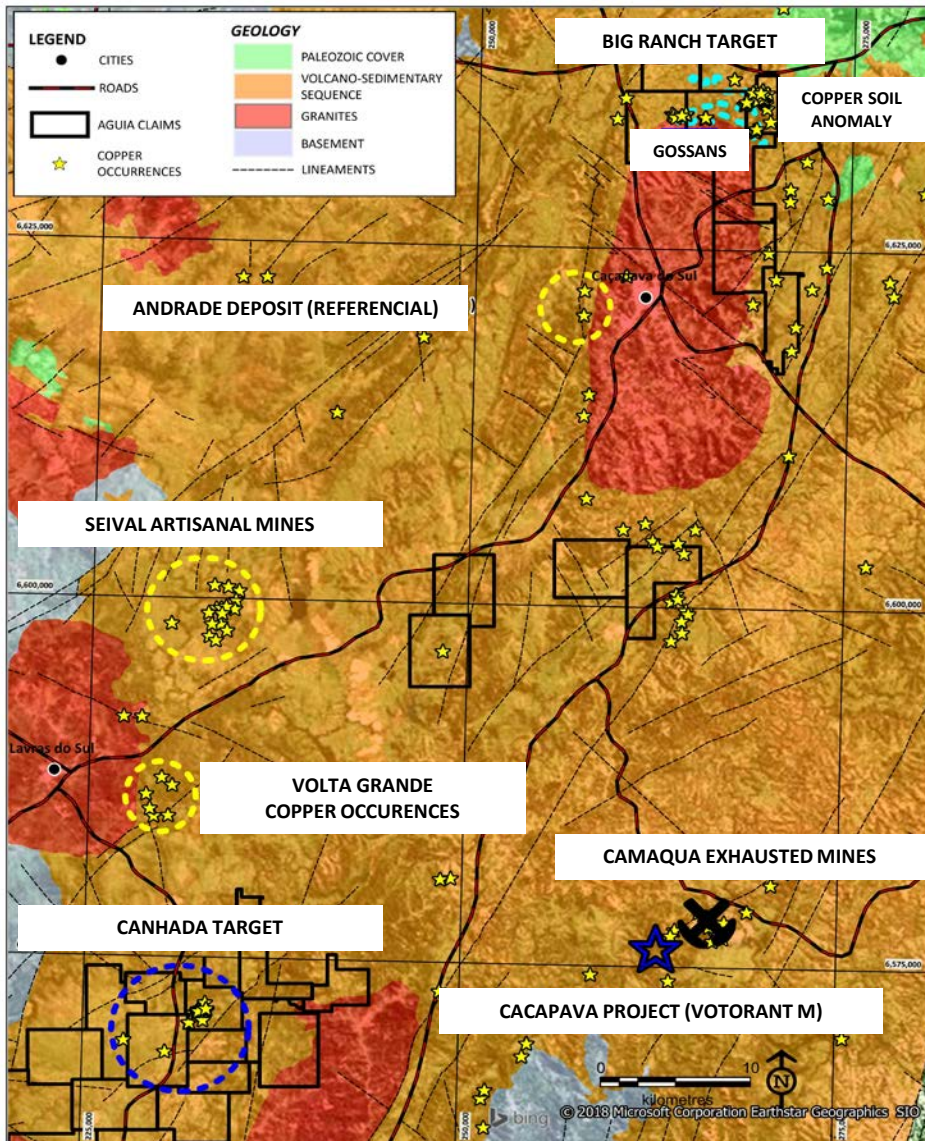


<sup>1</sup> LP = Preliminary License, LI= Installation License, LO=Operating License

A photograph of a large, layered rock formation, likely a copper belt, showing various shades of brown, tan, and green. The rock has a rough, textured appearance with visible mineral veins and fractures. The background is a solid blue color.

# RIO GRANDE COPPER BELT

# New Zone of Copper Mineralization<sup>1</sup>

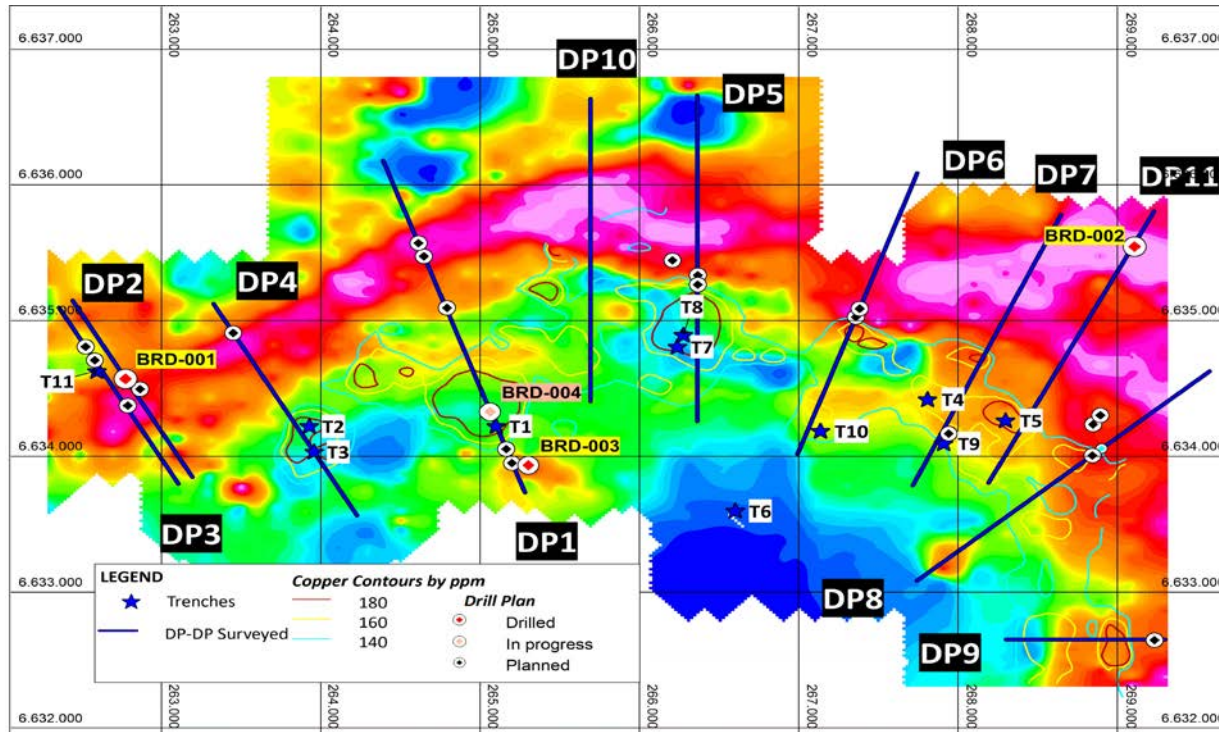


- Aguia has staked 23 tenements, totalling 340km<sup>2</sup> (34,000 hectares), within the prolific Rio Grande Copper Belt
- Mineralization is hosted in a 100km long x 60km wide belt with historical production from Iron Oxide Copper Gold (IOCG) deposits
- Geological environment is highly prospective and includes;
  - the past producing Camaqua copper mine,
  - a new Zn-Pb project currently being licensed by Nexa Resources (Votorantim Group) and
  - the Andrade copper deposit owned by Brazilian based Referencial.

Regional geological map of the Rio Grande Copper Belt, highlighting the distribution of Aguia's Claims.

<sup>1</sup>See ASX release 27<sup>th</sup> February 2018, ASX release 20<sup>th</sup> April 2018 ASX release 2<sup>nd</sup> August, 2018 and ASX release 12<sup>th</sup> September, 2018

# Big Ranch: Drilling Underway



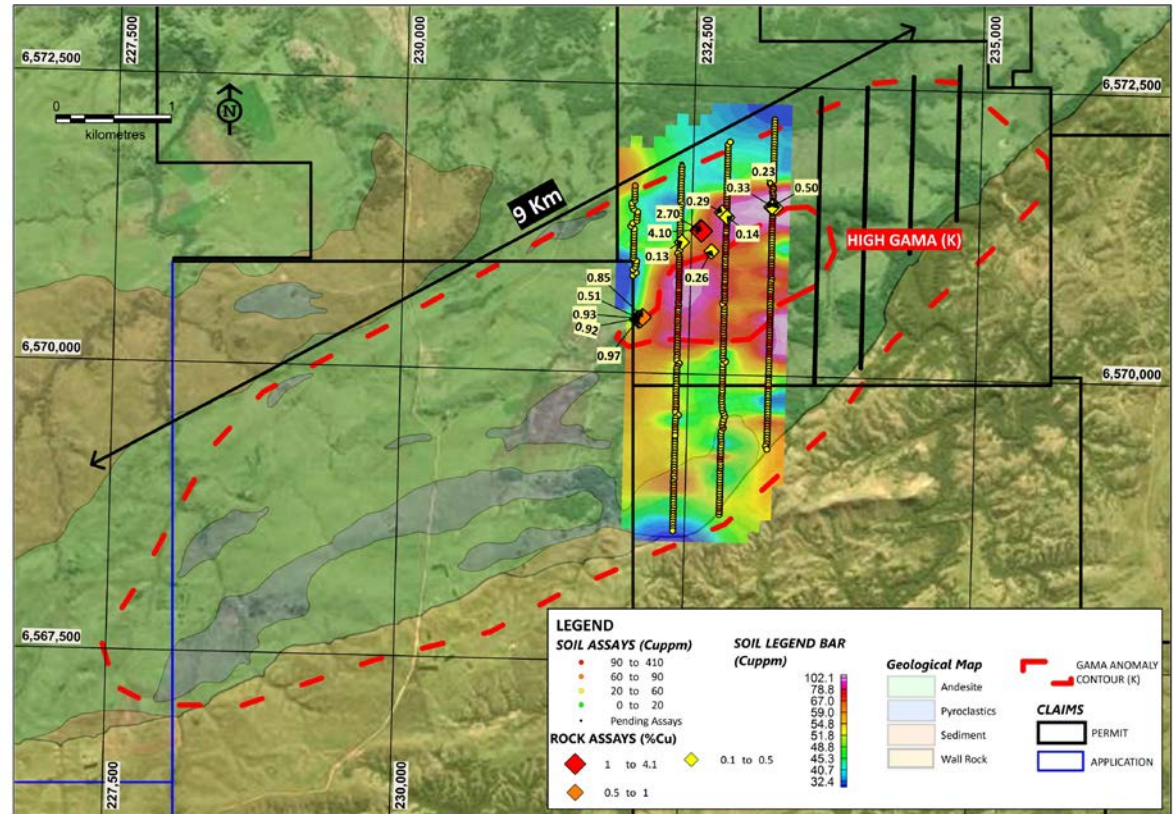
Chargeability map with anomalies on the northern side of the target, Dipole-Dipole grid lines and planned drill holes.

- Located along northern edge of Caçapava Granite – The target extends over approximately 6 km and is characterized by significant copper- and-gold-in-soils anomalies as well as anomalous zinc and lead
- 3,000 metre diamond drilling program commenced October 2018 and expected to take 3 months
- By analyzing the data gathered from the ground geophysics, in combination with mapping, rock chip sampling and trench results, four target areas have been identified for initial drilling
- Target Areas 1 to 3 were selected from the geological, geochemical and geophysical data, while Target Area 4 is essentially a geophysical target

# Exploration advancing at Canhada



Example of copper mineralization at surface on the Canhada Target. Hydrothermally altered volcanic rock with malachite filling fractures in stockwork pattern. Sample grading 4.09% Cu.



Copper in soil geochemical grid of the Canhada Target.

- Located 20km south of Lavras do Sul, where Aguia has its field office
- 9km long x 3km wide structurally controlled trend, within which a 2.4km x 1.4km copper-in-soil anomaly with multiple copper occurrences identified in bedrock (remains open to the northeast)
- Early rock samples Cu - soil sampling underway to be followed up by ground geophysics and scout drilling once Big Ranch drilling complete.

# Experienced Board & Management



## **Paul Pint, Executive Chairman**

Mr. Pint, is a capital markets professional with over 20 years of experience in senior positions at various financial institutions and boutique investment banks in Canada. Mr. Pint is a Chartered Professional Accountant and holds a Bachelor of Commerce degree from the University of Toronto.

## **Justin Reid, Managing Director**

Geologist and capital markets executive with over 20 years experience focused exclusively in the mineral resource space. Senior positions at Paladin Energy and National Bank Financial, where he directed the firm's sales and trading in the mining sector.

## **Fernando Tallarico, Technical Director**

B.Sc. Geology, M.Sc., Ph.D. and P.Geo. Over 25 years' experience in minerals exploration in South America with Vale, Falconbridge/Noranda, BHP Billiton and junior companies of the fertilizer sector. Has been instrumental in putting together Aguiá's portfolio of assets.

## **Guilherme Jacome, Head of Engineering**

With over 15 years of engineering experience, having worked on mining projects in Brazil, Chile, Australia, Canada, Zambia and Mozambique. In his most recent position, Mr. Jacome led a team that successfully completed the Bankable Feasibility Study for a \$2 billion potash project in Brazil in less than a year. Previously, Mr. Jacome was General Manager at Vale S.A.

## **Catherine Stretch, Chief Commercial Officer**

Over 15 years experience in capital markets managing companies and funds in the resource sector with expertise in global agriculture. Formerly Chief Operating Officer of a Canadian fund management firm with +\$1bn in AUM.

## **Ryan Ptolemy, Chief Financial Officer**

Mr. Ptolemy is a Chartered Professional Accountant, Certified General Accountant, and CFA charter holder. Mr. Ptolemy has extensive experience in the role of CFO for a number of publicly listed companies, particularly in the mining sector.

## **David Gower, Non-Executive Director**

Mr Gower is a geologist with over 25 years' experience in the minerals industry including senior positions with Falconbridge Limited and Noranda Inc (now Xstrata). He is a member of the Association of Professional Geoscientists of Ontario and of the Canadian Institute of Mining.

## **Brian Moller, Non-Executive Director**

Mr Moller specializes in capital markets, mergers and acquisitions and corporate restructuring, and has acted in numerous transactions and capital raisings in both the industrial and resources and energy sectors. He has been a partner at the legal firm, HopgoodGanim for 30 years

## **Alec Pismiris, Non-Executive Director**

Mr Pismiris has over 30 years' experience in the securities, finance and mining industries. He is currently engaged as Interim President and Chief Executive Officer Pacton Gold Inc., a company listed on the TSX Venture Exchange and serves as director and company secretary of several ASX listed resources companies.

## **Diane Lai, Non-Executive Director**

Over 22 years of global experience in business development, management and acquisitions. Formerly worked at Vodaphone, Entrata Communications, and was instrumental in the acquisition of FloNetwork to DoubleClick and Platform Computing to IBM. Diane graduated from the University of Waterloo and holds an MBA from the Kellogg School of Management at Northwestern University.

## **Andrew Bursill, Corporate Secretary**

Mr Bursill was appointed as Company Secretary on 28 September 2010. In addition, Mr Bursill is a Director and Company Secretary of Argonaut Resources NL, and is the Company Secretary of numerous ASX listed companies across a variety of industries as well as several unlisted and private companies.

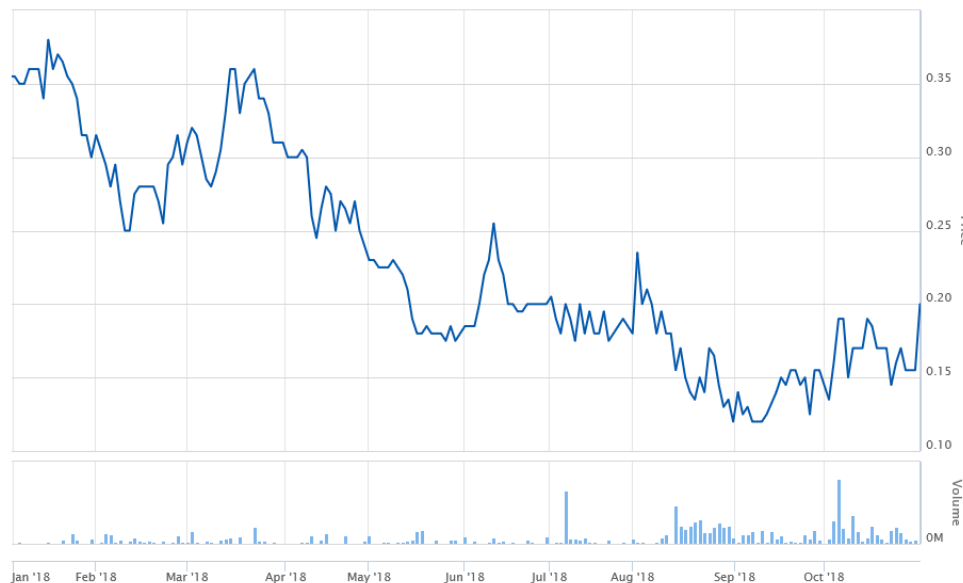
# Capital Structure & Financing Activities



Fully Diluted Equity	
Ordinary Shares issued	131.5 m
Options	9.5 m
Warrants	20.3 m
Fully Diluted	161.3 m
Undiluted Market Cap at A\$0.20 (31 October 2018)	\$26 m
Fully Diluted Market Cap at A\$0.20	\$32 m
52 week range	\$0.12 - \$0.41

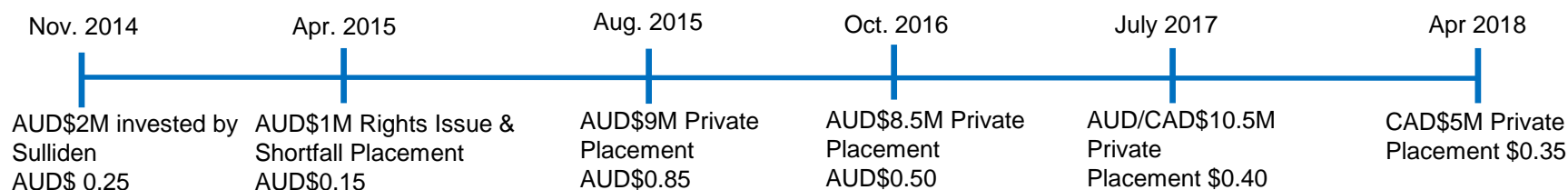
Register – Ordinary Shares		
	Shares Million	%
TSXV registered – Canada	40.0	30
ASX registered – Australia	91.5	70
<b>Total</b>	<b>131.5</b>	<b>100</b>

## AGR Performance YTD



- Recent institutional turnover has occurred with overhang now cleared

## Private Placement Activity





# Competent Persons Statement



The Três Estradas Phosphate Project has a current JORC/43-101 compliant mineral resource which includes Measured Resources of 36 Mt grading 4.01% P<sub>2</sub>O<sub>5</sub>. Indicated Resources of 47 Mt @ 4.18% P<sub>2</sub>O<sub>5</sub> and Inferred Resources of 21.8 Mt @ 3.67% P<sub>2</sub>O<sub>5</sub>.

The Lucena Phosphate Project has a current JORC compliant inferred mineral resource of 55.1Mt grading 6.42% P<sub>2</sub>O<sub>5</sub>

Information in this presentation is extracted from the following reports, which are available for viewing on the Company's website:

*11 October 2018: 3000 Metre Diamond Drilling Program Underway at Big Ranch Copper Prospect*

*12 September 2018: Big Ranch Copper Exploration and Três Estradas Update*

*2 August 2018: Aguia Reports on 17 New Gossan Samples at Big Ranch*

*20 April 2018: Latest Results at Aguia's Big Ranch Outline 6km Copper Anomaly*

*21 March 2018: Bankable Feasibility Study of Três Estradas Confirms Robust Project Economics*

*26 February 2018: Aguia Identifies Zone of Copper Mineralisation within 9km Target Area in Rio Grande do Sul, Southern Brazil*

*16 January 2018: Auger Drilling At Mato Grande Carbonatite Returns Highly Encouraging Assay Results*

*20 September 2017: Três Estradas Phosphate Project's 2017 Mineral Resource Statement, Rio Grande do Sul, Brazil*

*11 October 2016: Aguia Achieves Key Project Development Milestone with Environmental Impact Assessment Submitted for Três Estradas*

*17 March 2016: Aguia Commences Exploration on Terra Santa Claims Adjacent to Três Estradas*

*9 December 2015: Aguia Signs Option to Expand Phosphate Land Position in Rio Grande*

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements listed above and, in the case of estimates of Mineral Resources or Ore Reserves that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The technical and scientific information in this presentation, including information that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves, is based on information compiled by Dr Fernando Tallarico, who is a member of the Association of Professional Geoscientists of Ontario. Dr Tallarico is a full-time employee of the company. Dr Tallarico has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Tallarico consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

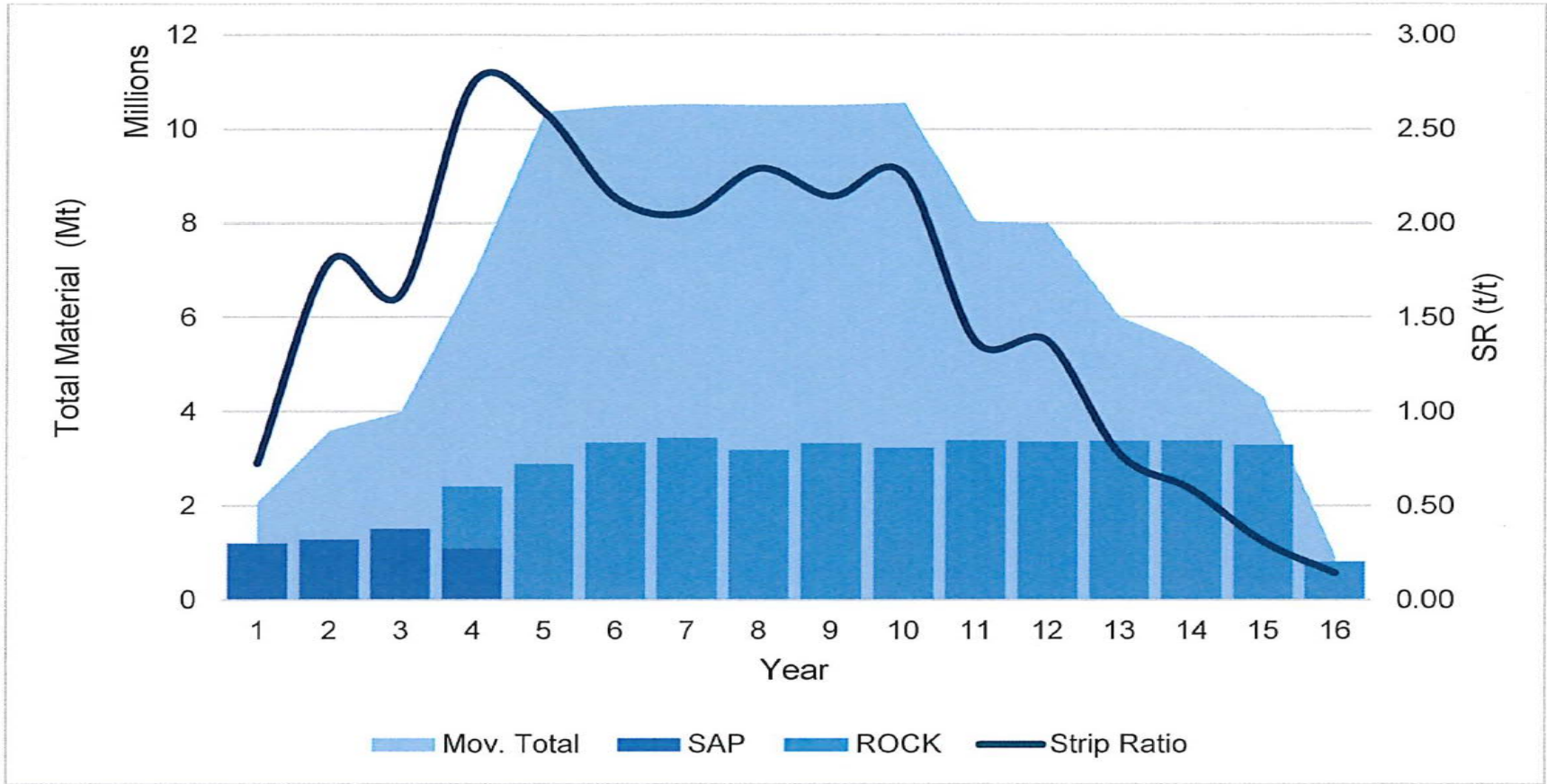


# APPENDIX

# Bankable Feasibility Study (BFS)

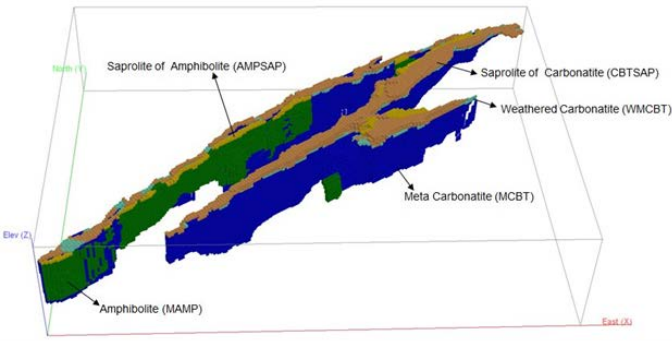


Mine Schedule - Quantities



SAP – soft ore (saprolite)

# Três Estradas Mineral Resource



Resource Classification	Domain	Volume (m <sup>3</sup> X 1,000)	Tonnage (T X 1,000)	Density (T/m <sup>3</sup> )	P <sub>2</sub> O <sub>5</sub> %	P <sub>2</sub> O <sub>5</sub> as Apatite (%)
Measured	AMSAP	36	55	1.54	6.63	15.70
	CBTSAP	491	796	1.63	10.18	24.11
	WMCBT	602	1,686	2.81	4.24	10.03
	MCBT	11,619	33,004	2.85	3.85	9.12
	MAMP	227	655	2.89	3.72	8.81
<b>Total Measured Resources</b>		<b>12,975</b>	<b>36,196</b>	<b>2.82</b>	<b>4.01</b>	<b>9.50</b>
Indicated	AMSAP	400	653	1.65	5.00	11.85
	CBTSAP	2,330	3,834	1.66	9.21	21.82
	WMCBT	370	1,026	2.78	4.38	10.39
	MCBT	13,000	36,984	2.85	3.67	8.69
	MAMP	1,571	4,517	2.88	3.98	9.43
<b>Total Indicated Resources</b>		<b>17,671</b>	<b>47,014</b>	<b>2.74</b>	<b>4.18</b>	<b>9.91</b>
<b>Total Measured + Indicated Resources</b>		<b>30,646</b>	<b>83,210</b>	<b>2.77</b>	<b>4.11</b>	<b>9.73</b>
Inferred	CBTSAP	27	45	1.64	5.41	12.82
	WMCBT	16	45	2.83	3.93	9.32
	MCBT	7,034	20,247	2.88	3.65	8.64
	MAMP	528	1,508	2.87	3.89	9.22
<b>Total Inferred Resources</b>		<b>7,605</b>	<b>21,845</b>	<b>2.88</b>	<b>3.67</b>	<b>8.69</b>

■ Total pit-constrained Jorc/43-101 compliant resource :

- 36 Mt of measured resource grading 4.01% P<sub>2</sub>O<sub>5</sub>
- 47 Mt of indicated resource grading 4.18% P<sub>2</sub>O<sub>5</sub>
- 21.8 Mt of inferred resource grading 3.67 % P<sub>2</sub>O<sub>5</sub>

Três Estradas Phosphate Project's 2017 Mineral Resource Statement, Rio Grande do Sul, Brazil, Millcreek Mining Group, September 8, 2017

Mineral Resources are not mineral reserves and have not demonstrated economic viability. All figures are rounded to reflect relative accuracy of the estimates. The mineral resources are reported within a conceptual pit shell using a cut-off grade of 3.0% for all mineralized domains. Optimization parameters include a mining recovery of 100%, 0% dilution, process recovery of 87% P<sub>2</sub>O<sub>5</sub> for saprolites and 80% P<sub>2</sub>O<sub>5</sub> recovery for fresh rock, concentrate grade of 35.0% for saprolite and 32.0% for fresh rock, pit slopes of 34° for saprolite/51° & 55° for fresh rock, selling price of US\$215 for P<sub>2</sub>O<sub>5</sub> concentrate and exchange rate of 3.2 R\$ to US\$.

# Key Brazil Mining Permits



## Preliminary License (LP)

- Most challenging permit milestone to obtain
- Entails location, social and environmental approval of the project based on field studies and public hearings
- Awarded by the Environmental Protection Agency of the State of Rio Grande do Sul (FEPAM)
- Establishes requirements to be fulfilled in the engineering design of the project-including environmental and social aspects

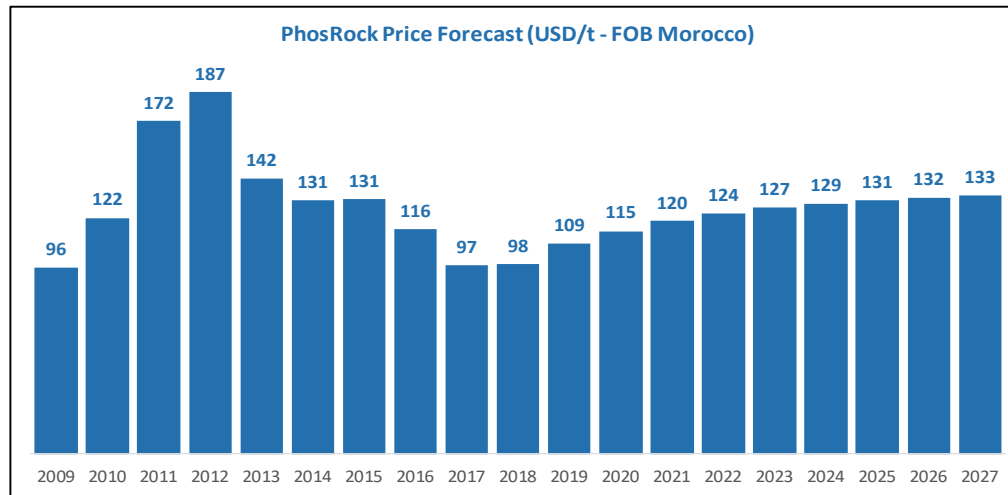
## Installation License (LI)

- Provides authorization to start construction
- Obtain by: (i) fulfillment of LP conditions; (ii) approval of the mine development plan (PAE) which also demonstrates project economic feasibility; (iii) and approval of the Basic Environmental Plan (PBA)

## Operation License (LO)

- Grant of Mining Concession by Mining and Energy Ministry
  - Allows company to initiate mining plus processing of phosphate
- Requires inspection of constructed mine and plant to ensure compliance with codes
- Granted once all aspects of the approved project design are implemented in accordance with the LP and LI
- Valid in increments of four to ten years and can be renewed as necessary until end of mine life

# Principle Assumptions



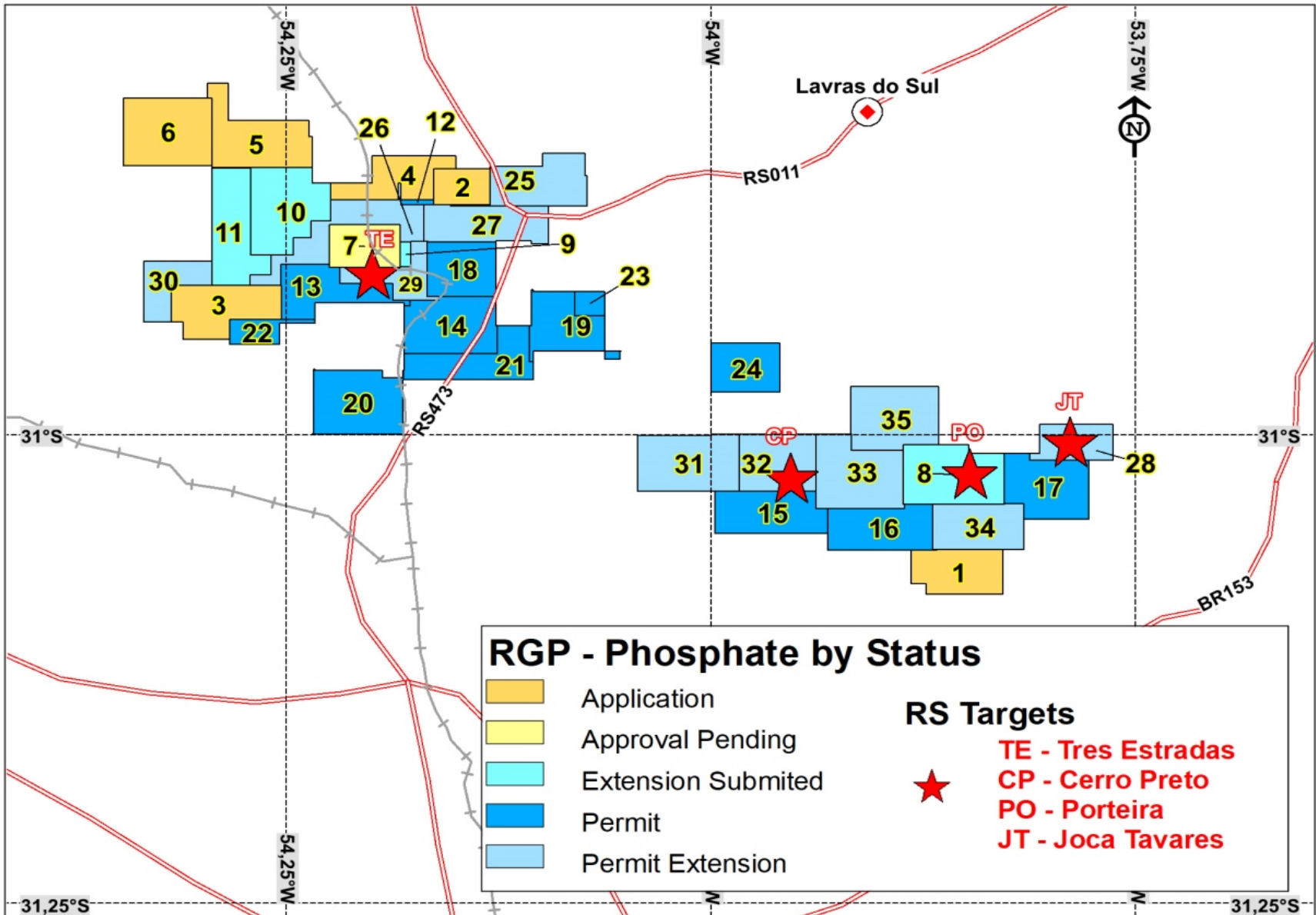
The Bankable Feasibility Study (BFS) referred to in this presentation relies on the following assumptions:

- A long term price of US\$133/t phosrock for the entire Life of Mine. The price forecast reflects average prices cleared at the main Southern Brazilian ports and includes sea freight charges, demurrage, port costs and taxes (including import duties).
- A long term price of US\$29/t of calcite (aglime) reflects local prices paid by the final consumer (farmers).

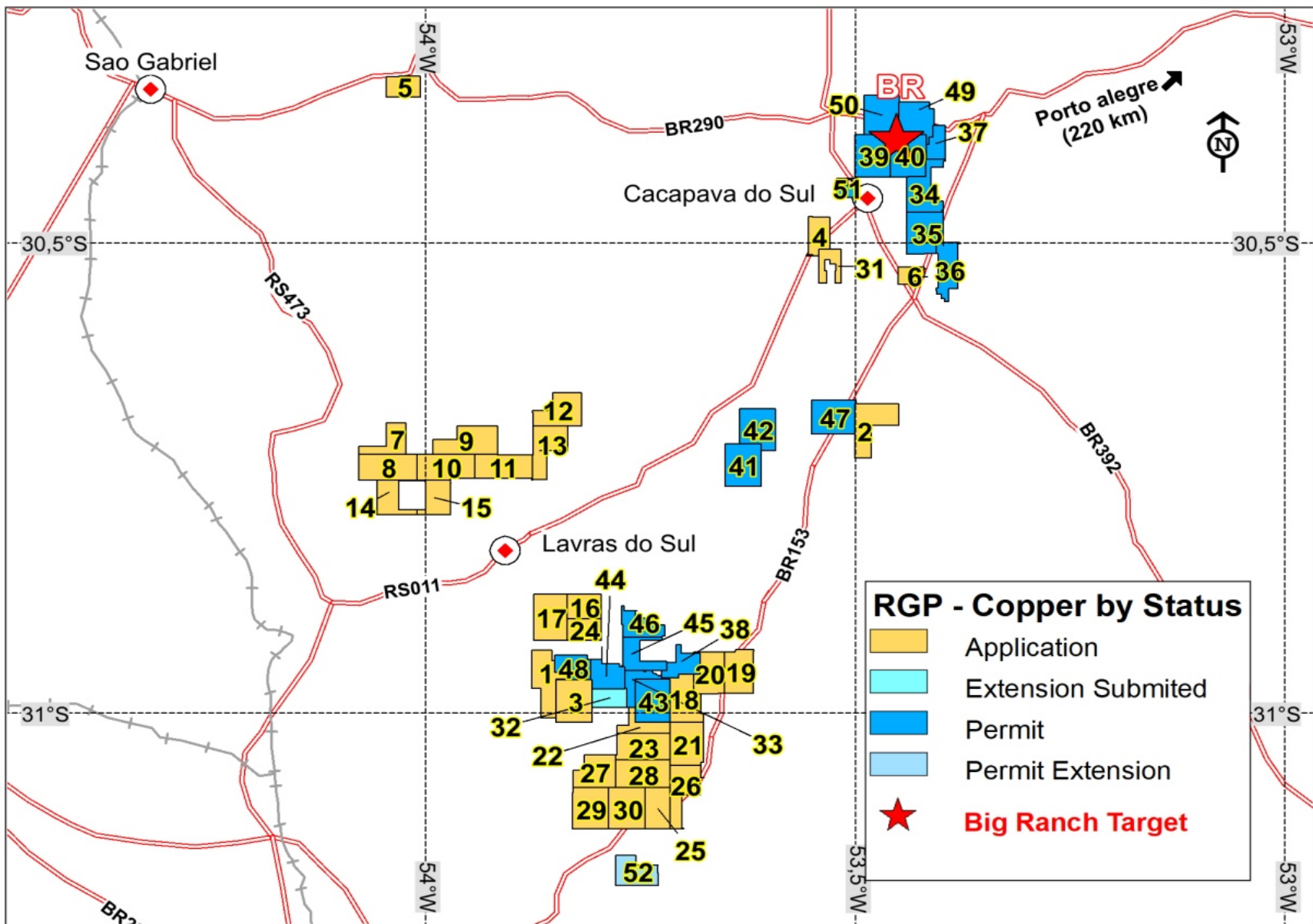
## Other Key Assumptions:

- Exchange Rate: BRL:USD = 3.45:1
- Production Royalty: 2% (of Gross Proceeds)
- CFEM (Gov't mining tax): 2% (of Gross Proceeds)
- Income Tax: 34%
- Depreciation: Phase 1: 12% - Phase 2: 13.5%

# Três Estradas Phosphate Permits

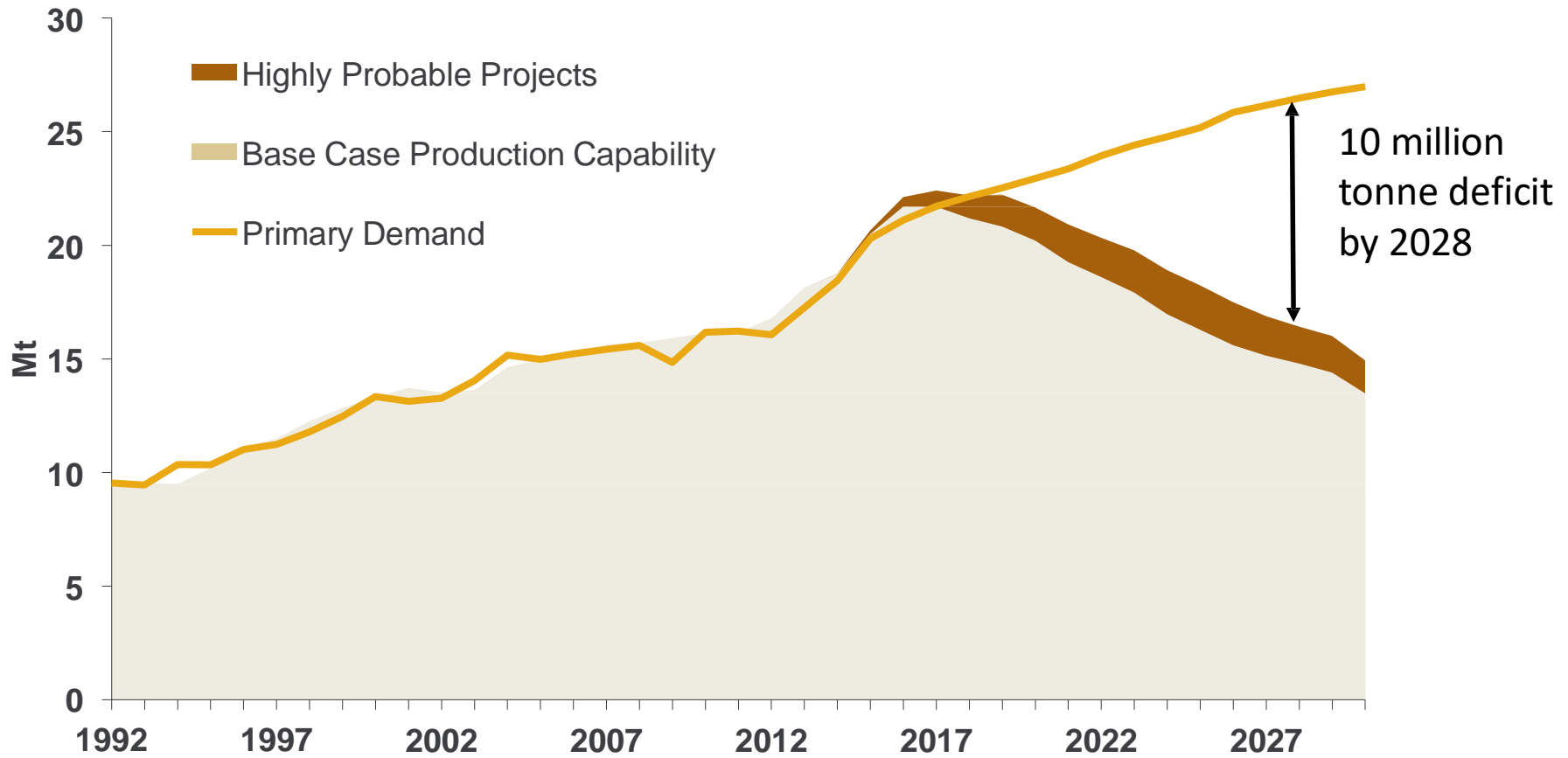


# Rio Grande Copper Permits





# Copper – Supply Deficit Looms



Source: Wood Mackenzie, Q4 2014



**THANK YOU**