

Iluka Resources Limited



Jacinth-Ambrosia Site Visit

Eucla Basin, South Australia

July 2014

Disclaimer – Forward Looking Statements



Forward Looking Statements

This presentation contains certain statements which constitute “forward-looking statements”. These statements include, without limitation, estimates of future production and production potential; estimates of future capital expenditure and cash costs; estimates of future product supply, demand and consumption; statements regarding future product prices; and statements regarding the expectation of future Mineral Resources and Ore Reserves.

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- changes in exchange rate assumptions;
- changes in product pricing assumptions;
- major changes in mine plans and/or resources;
- changes in equipment life or capability;
- emergence of previously underestimated technical challenges; and
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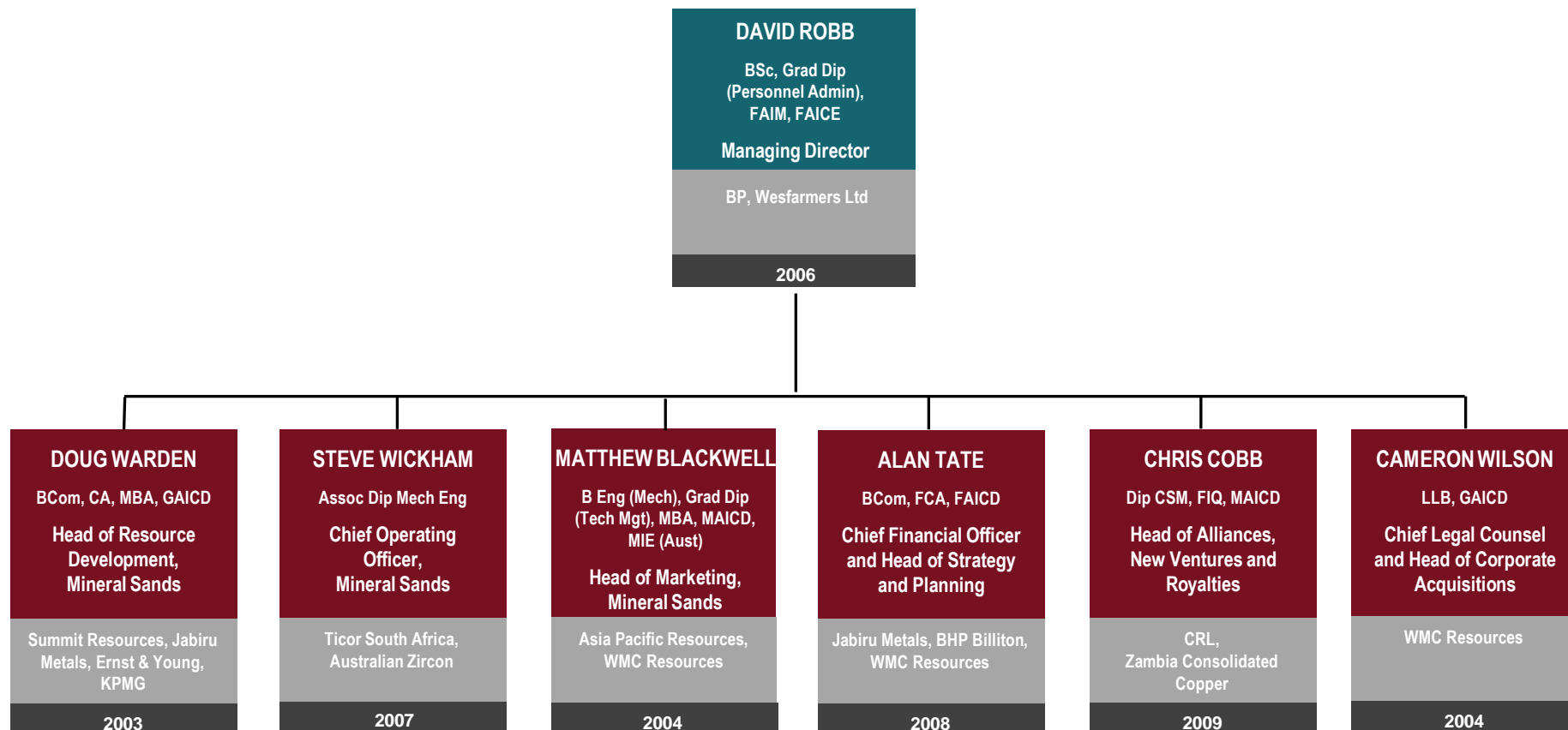
Iluka’s Ore Reserves and Mineral Resources information in this document have been prepared in accordance with JORC 2012. Refer to Iluka’s Ore Reserves and Mineral Resources Statement 2013, Iluka Annual Report, Page 133-135 and ASX Release on 30 April 2014, “Addendum to 2013 Annual Report”.



Operational Overview

Steve Wickham, Chief Operating Officer, Mineral Sands

Executive Team



Iluka International Presence



Mineral Sands Operation Team

Chief Operating
Officer
Mineral Sands

Steve Wickham

General Manager
Commercial
Mineral Sands

Scott McQueen

Chief Mining
Engineer Mineral
Sands

Chris Lee

HR Manager
Australian
Operations

Steve Stock

General Manager
US Operations

Shane Tilka

Eastern Operations
Manager

Dan McGrath

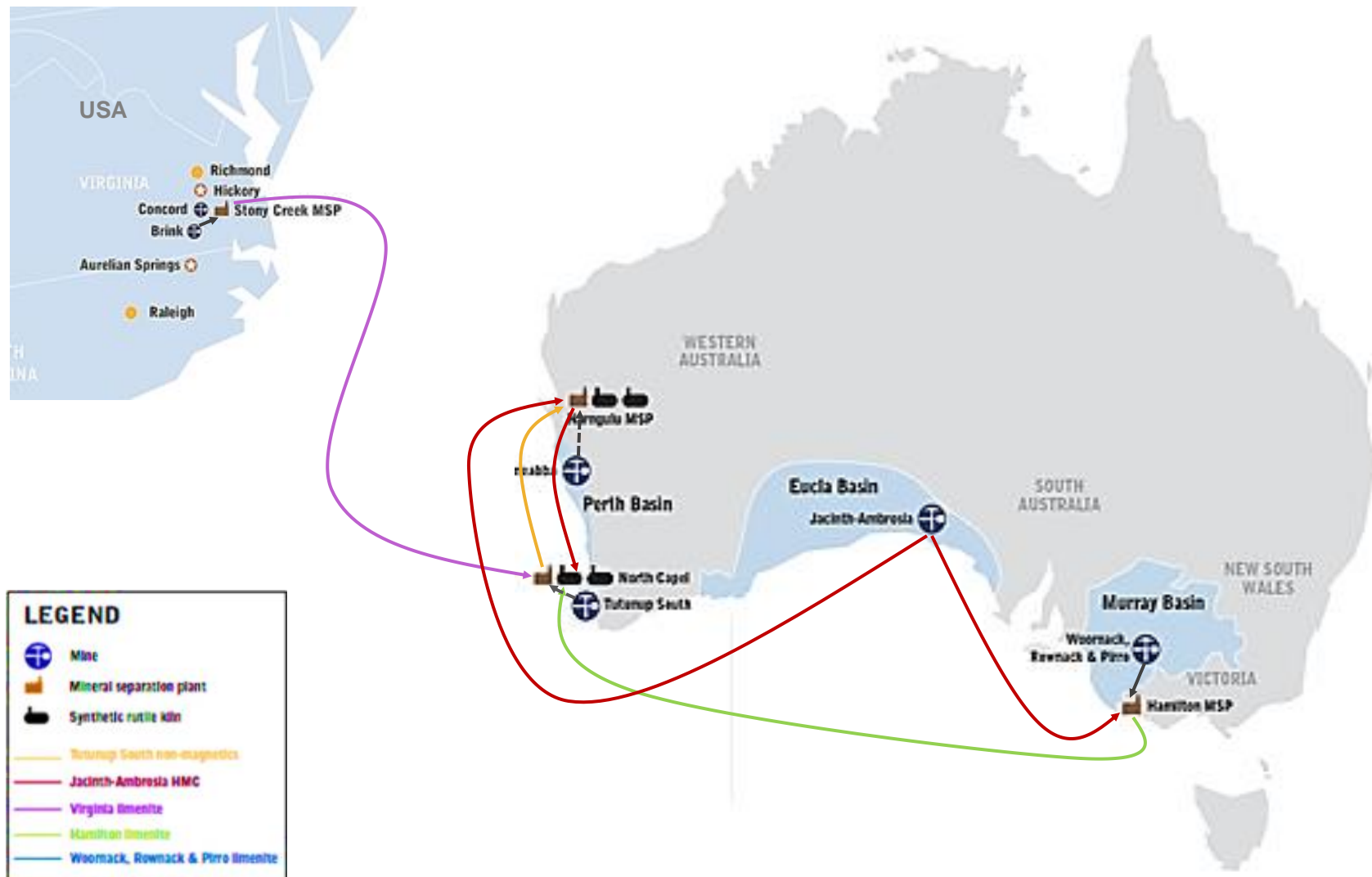
South West
Operations Manager

Garry Green

Narngulu Operations
Manager

Stuart Forrester

Mineral Sands Operations Integration



Operational Overview

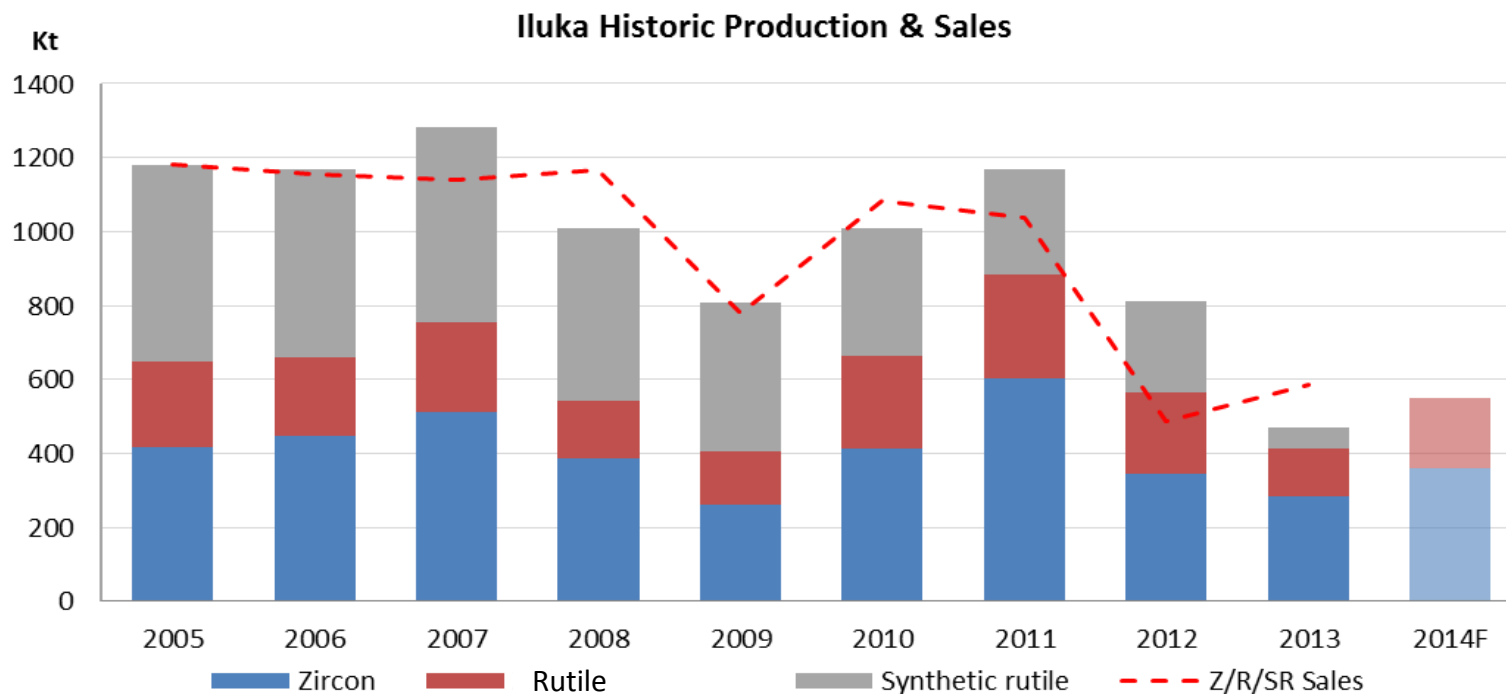


- Operations in Australia and United States, sales offices globally distributed
- Approximately 620 operational employees (direct Iluka, excluding contractors)
- At 31 December 2013 approximately 10 years reserve cover; resources ~6 times Ore Reserves
- Flexible operational mindset developed
- Close collaboration with market developments through mine to market

JORC Status (31 December 2013)	Ore (Mt)	HM In-Situ (Mt)	Rutile (%)	Zircon (%)	Ilmenite (%)
Ore Reserves	476.9	26.6	6	19	52
Mineral Resources	2,590.4	178.7	6	10	59

Refer Iluka's Annual Report 2013 Ore Reserves and Mineral Sources Statement

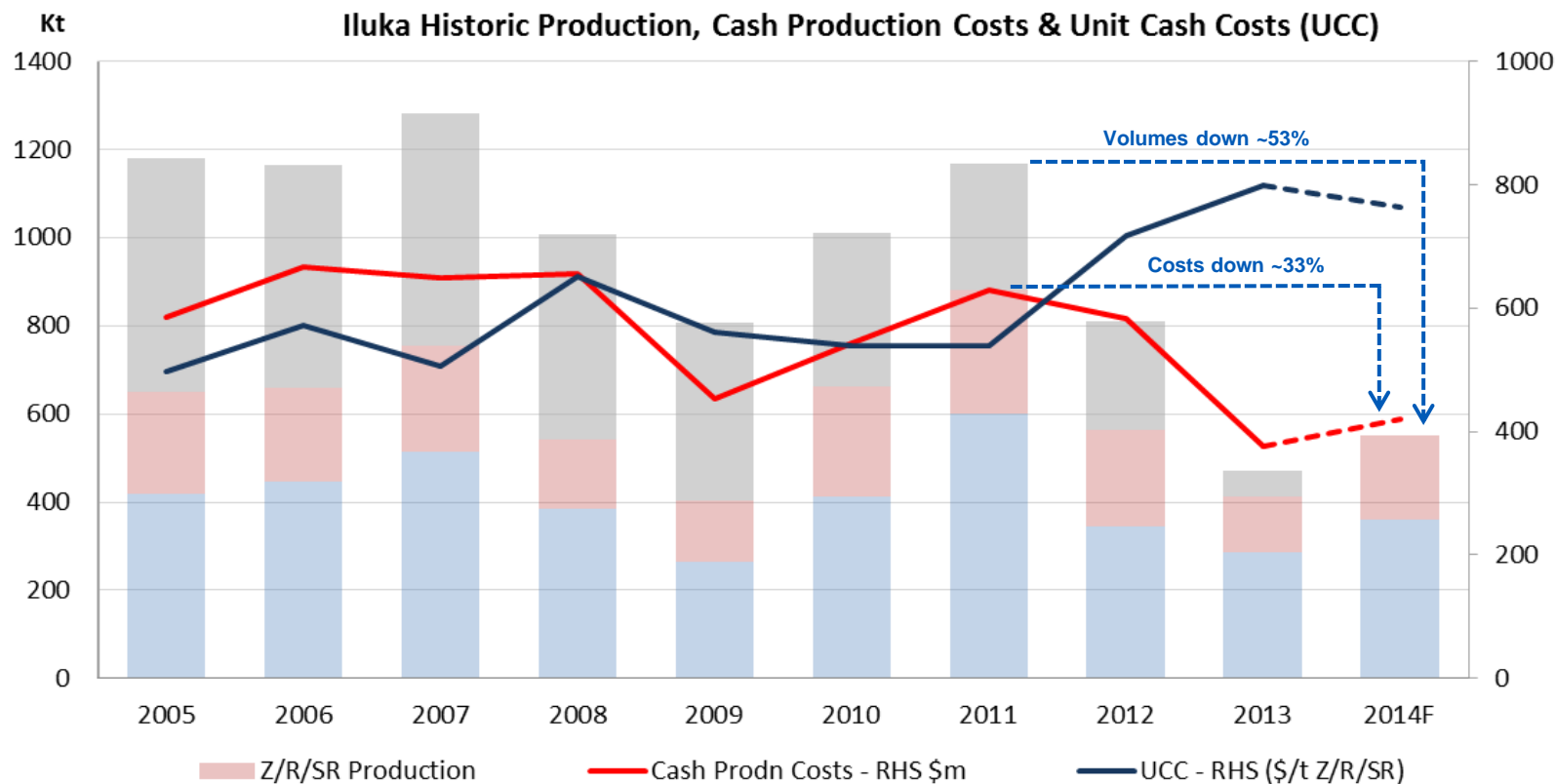
Mineral Sands Production and Sales



Production Volumes kt	2009	2010	2011	2012	2013	2014F
Zircon	263	413	601	343	285	360
Rutile	141	250	281	220	127	190
Synthetic Rutile	404	347	285	248	59	-
Total Z/R/SR	808	1,010	1,167	811	471	550
Ilmenite	833	685	660	674	584	Not Guided

2014F per Iluka Key Physical and Financial Parameters 2014 statement 21 February 2014
 Rutile includes other high grade TiO₂ products produced and sold i.e. HyTi/Leucoxene

Operational Response

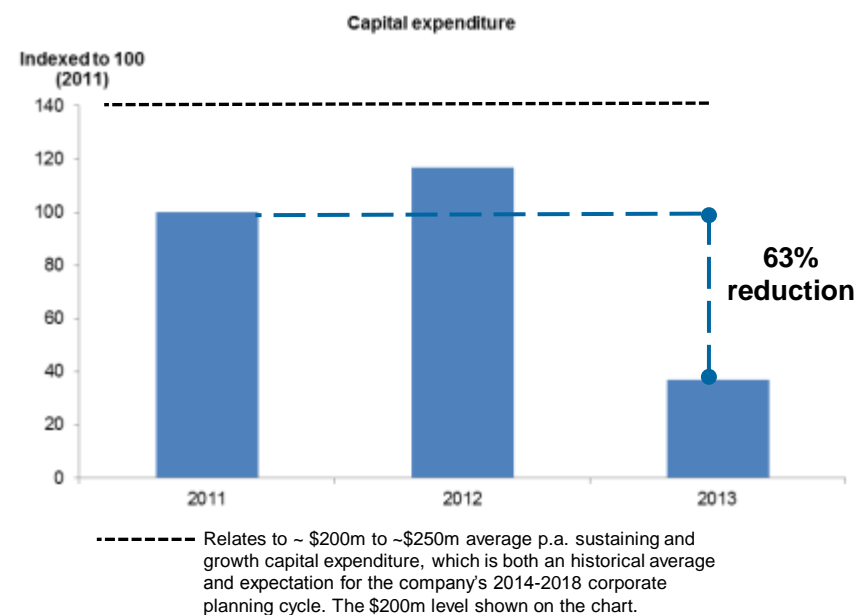
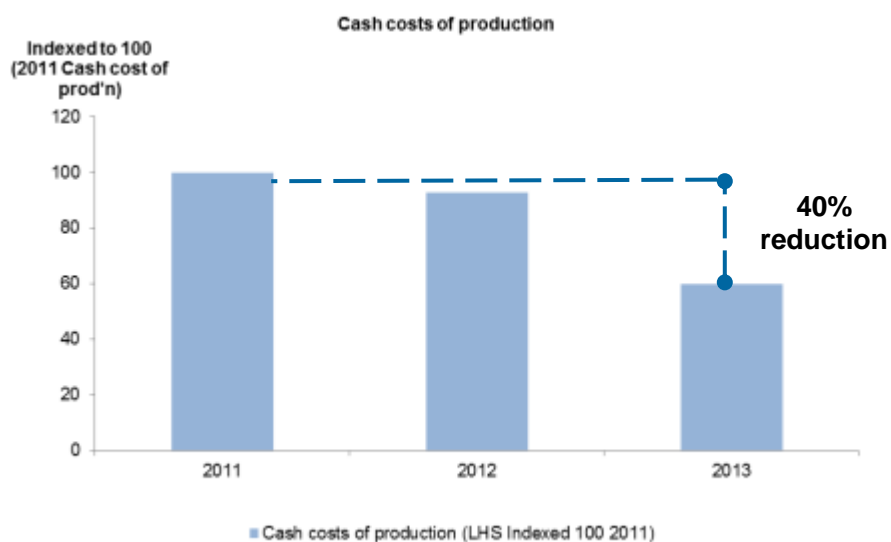


- Major operational restructure, cost reduction and capital efficiency programs implemented
- Material reduction in cash production cost; some inefficiencies on unit cost basis (see note below)
- Operations priorities: safety, production costs, unit costs, inventories, position Iluka for upswing

Note: Cash cost of production shown here include costs associated with mineral sands production as well as by-product cash costs (char, iron oxide etc). In recent years, these by-product costs have become an increasing amount; for example in 2012 by-product costs were ~\$10m, in 2013 ~\$20m and in 2014 guided at ~\$65m. Shown here is the guided \$430m of 2014 cash cost, but inclusive of this ~\$65m.

2014F as disclosed in ASX Release, Iluka Key Physical and Financial Parameters 2014, 21 February 2014

Cash Conservation Focus

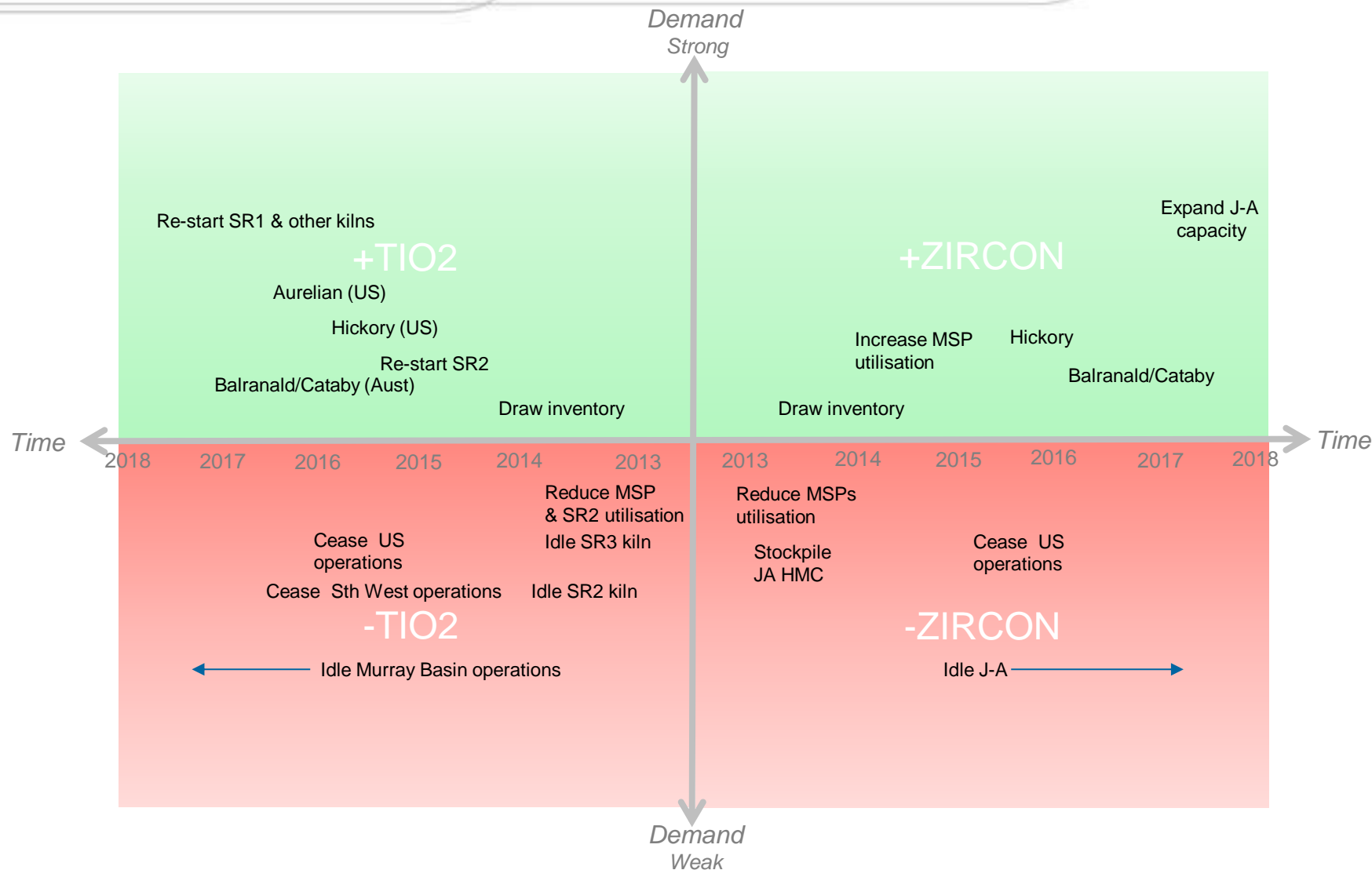


Operational Response and Cost Reductions







- Narngulu SR kiln idled April 2013
- Eneabba mine idled April 2013
- North Capel SR kiln idled end Q2 2013, key staff retained, re-start ready
- Tutunup South mine idled end Q2 2013, restart ready per SR kiln timing
- Narngulu (WA) mineral separation plant operating ~50% utilisation
- Hamilton (Vic) mineral separation plant operating at ~80% utilisation
- Woornack, Rownack and Pirro (Vic) earth movements optimised
- Jacinth-Ambrosia mine operating at normal production levels
 - mined low grade area from Q3 2012 to February 2013
 - HMC production stockpiled from July 2012 to April 2013
 - downstream processing resumed, HMC stockpile stabilised
- ~25% reduction in Australian Operations overheads
- ~30% reduction in Australian Operations workforce (~200 positions)
- Focus on cash capital efficiency with projects prioritised



Operations – Options Flexibility



2013 and 2014 Production Settings

	2013	2014	
Murray Basin Mining (WRP)	Full utilisation		
Hamilton MSP	~50% utilisation	~80% utilisation	 Focus on balancing unit costs & inventory position objectives
Jacinth-Ambrosia Mining	Full utilisation – concentrate build		
Narngulu MSP	~40% utilisation	~50% utilisation	
Tutunup South Mining	Idled June		
SR2 Kiln	Idled June		
Other 3 Kilns	Idled prior years		
US Mining (Virginia)	Near full utilisation	Idling of Concord mine occurred April; Brink mining to continue	
Stony Creek MSP	~80% utilisation	Feed dependent ~50% utilisation	

2014 operating regimes dependent on market demand conditions

Project Execution and Delivery



Operational and Project Implementation - What Worked



'Focused on what we control – safety, environment, costs, capital, inventory & stakeholders'

Culture

- Adaptive cultural change in 2009 based on leadership, accountability and flexibility
- Focused on *'setting high standards and achieving them'* - safety, environment, costs, planning and execution
- Maintained a lean flexible cost culture when times are good pays dividends in tough times
- Underpinned new culture with *'Game Plan'* alignment at all levels of the organisation

Planning

- Maintained internal confidentiality while developing response options
- Evaluated all available external and internal intelligence regarding market conditions
- Options analysis included impacts on margins, costs, inventory, people and stakeholders
- Options structured to respond to a wide range of possible market conditions
- All plans had to maintain organisational and operational readiness to respond quickly to rebound market
- Focused and achieved rapid integrated analysis, planning and execution - this is now done continuously



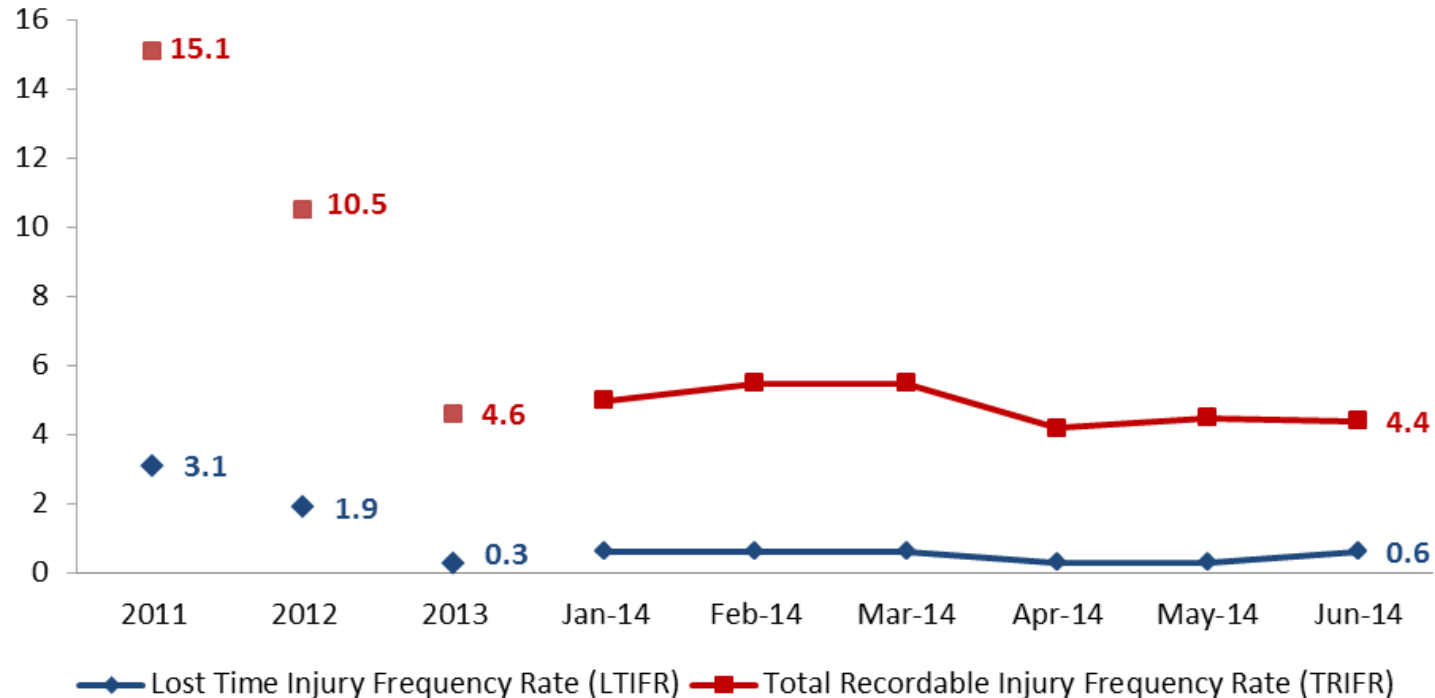
Execution

- World class technical groups in Geology, Metallurgy, Mine Planning and Projects Management
- Collaborative approach between disciplines at all levels of the organisation
- Commercial thinking in regards to project costs vs operational costs and performance

Continued Improvement in Safety Performance



Iluka Injury Frequency Rates



- Safe Production Leadership program launched in 2011
- 70% reduction in TRIFR since 2011
- 80% reduction in LTIFR since 2011



2014 Premier's Community Excellence Awards



Jacinth-Ambrosia's Nick Travers accepting the award from the Minister for Resources

Iluka's environmental excellence award recognises:

- A demonstrated commitment to maintain and improve environmental outcomes for all
- Environmental excellence beyond minimal compliance, it involves exceptional innovation

Iluka also achieved Premier's Award 2013 for Social Inclusion

Mineral Sands Project Development

Project	Location	Characteristics
Pre-execute		
Hickory	Virginia, USA	<ul style="list-style-type: none"> • Chloride ilmenite with associated zircon • Utilisation of existing mineral separation plant (MSP) • ~ 9 year mine life
Definitive Feasibility Study		
Balranald	Murray Basin, NSW	<ul style="list-style-type: none"> • High grade rutile, zircon and ilmenite s • Next planned mine development in Murray Basin • ~ 8 year mine life
Cataby	Perth Basin, WA	<ul style="list-style-type: none"> • Chloride ilmenite with associated zircon • Next planned mine development in WA • ~ 6 year initial mine life
Eucla Basin Satellite Deposits	Eucla Basin, SA	<ul style="list-style-type: none"> • 3 chloride ilmenite deposits with associated zircon • Close proximity to Jacinth-Ambrosia infrastructure • ~15 years life extension in-conjunction with or post JA
Aurelian Springs	North Carolina, USA	<ul style="list-style-type: none"> • Chloride & sulphate ilmenite with associated zircon • Utilisation of Virginia MSP • ~ 11 year mine life
Scoping / Pre PFS		
Puttalam	Sri Lanka	<ul style="list-style-type: none"> • Large, long life mainly sulphate resource, re- acquired by Iluka in 2013

In some cases, particularly the US, projects may be a significant component of the carrying value of the associated assets.



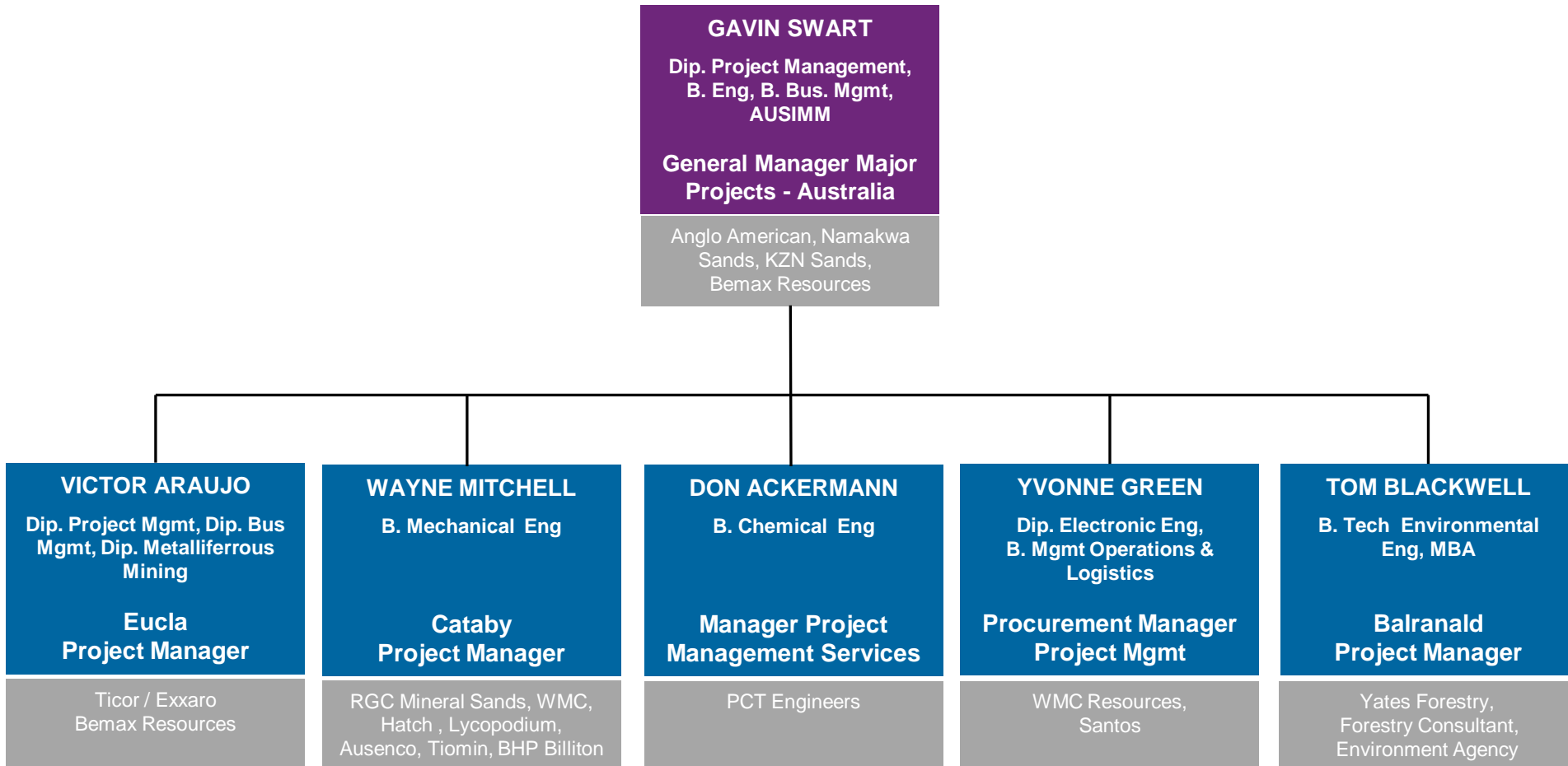
Project Development Overview

Gavin Swart, General Manager Major Projects

Project Management in Iluka

- Project management within Resources Development
 - Doug Warden, Head of Resources Development
- Cross disciplinary team working in close association with:
 - Innovation and Development
 - Exploration
 - Operations (integration with existing infrastructure and project delivery)
- Industry experienced team with expertise in:
 - process engineering
 - metallurgy
 - major project delivery
 - mineral sands mining & operations
 - environmental management

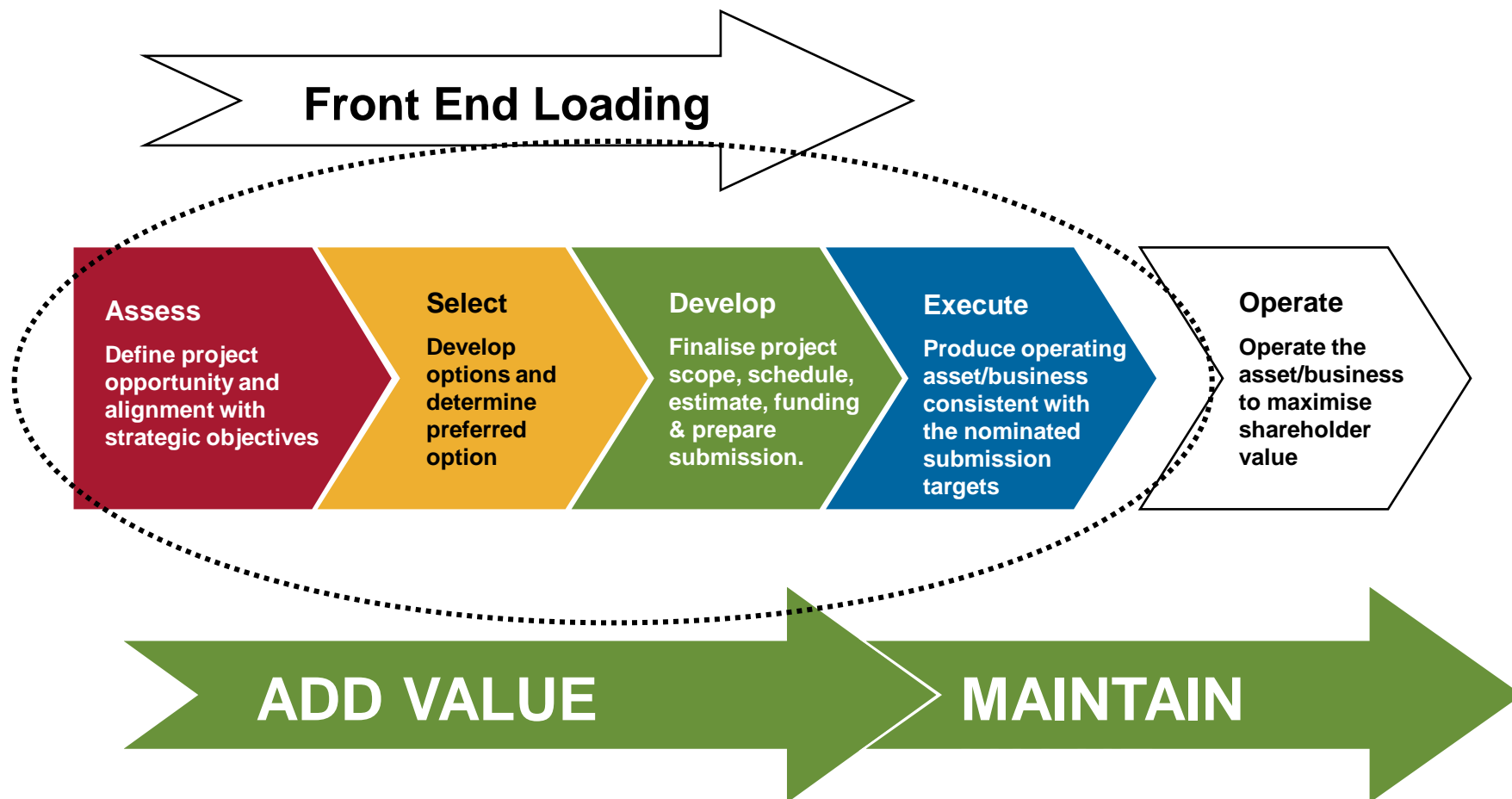
Project Development



Project Development – Iluka Context

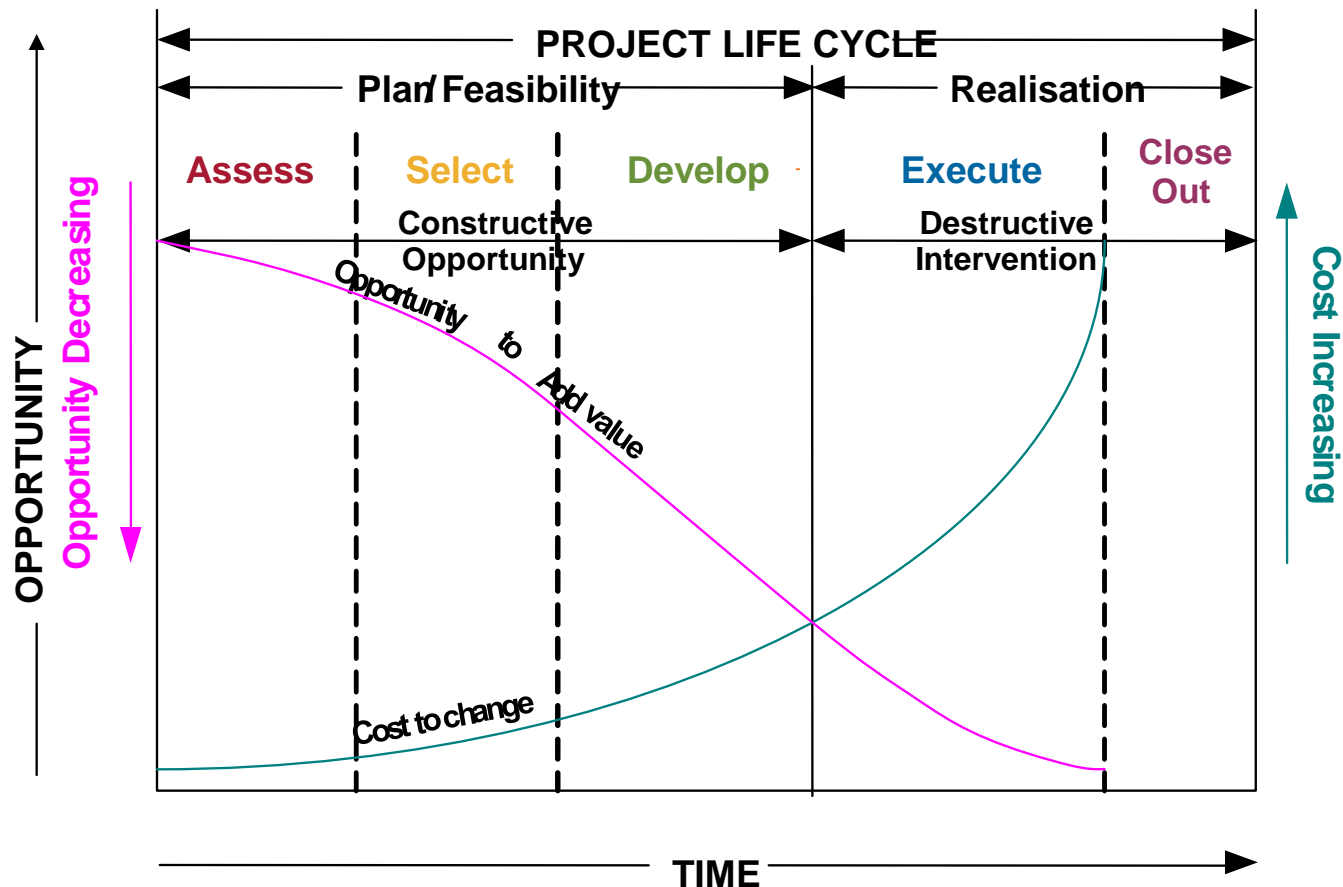
- Gated approach and commitment to various internal production options
 - dependent on portfolio optimisation
 - market demand considerations
- Capital-efficient focus
 - utilisation of existing assets, infrastructure and “spare” kit
- Capital estimates not provided until completion of DFS and Board approvals
- Iluka business plan cycle (5 years) indicative capex profile
 - ~\$200-250 million per annum average
 - subject to projects approved, capital approvals and phasing

Overarching Schedule

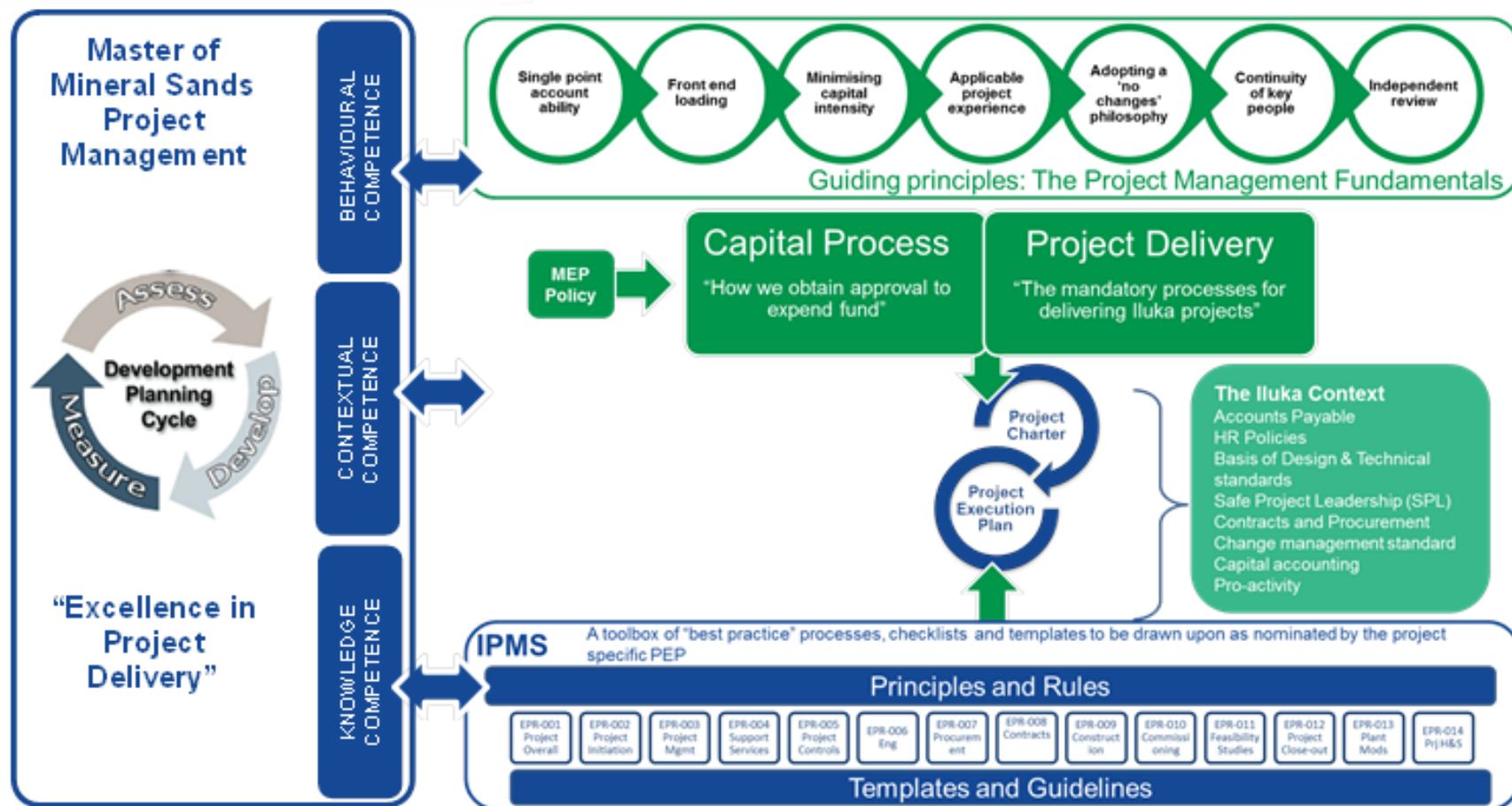


The Value of Front End Loading

Effect of change and opportunity to add value



Iluka Project Management System



- Gated approach to project delivery
- Outsourcing of study packages
- Integrated Engineering, Procurement, Construction and Management (EPCM) teams

Projects

Project	Progress	Next Steps
Balranald	<ul style="list-style-type: none"> • DFS Phase 1 works continuing on schedule • Site activities for hydrogeological Trial phase 3 (HP3) with drilling completed with long term test commenced • Environmental Scope (to complete EIS) awarded • Mining simulation model continues • Bore Hole Mining (BHM) process flow complete and trial construction underway 	<ul style="list-style-type: none"> • Revised hydrogeological model update • DFS phase 2 MEP • Commence Bore Hole mining trial activities • Execute Board Approval
Cataby	<ul style="list-style-type: none"> • DFS proceeding on schedule and below budget • PFDs and Mining unit plant (MUP) concept design completed • Integrated project structure 	<ul style="list-style-type: none"> • Existing approvals varied • Complete DFS works • Execute Board Approval
Sonoran, Typhoon and Atacama	<ul style="list-style-type: none"> • Sonoran PFS works continuing on schedule • Process engineering work packages progressing • Formal native title negotiations underway • Atacama resource drilling expenditure commenced • Includes conveyance of overburden, centrifuging in fines and dewatering of tailings in-stream 	<ul style="list-style-type: none"> • Complete tails dewatering centrifuge pilot testing • Commence Atacama PFS works (additional works assuming Atacama commences first – not included in Sonoran PFS) • Complete Sonoran PFS
Sri Lanka	<ul style="list-style-type: none"> • Negotiations are ongoing between Iluka, Lanka Sands, government Ministers and other relevant parties. • Further refined evaluation of 'value add' options 	<ul style="list-style-type: none"> • Establishment of tenement and mining licence arrangements

Projects – United States

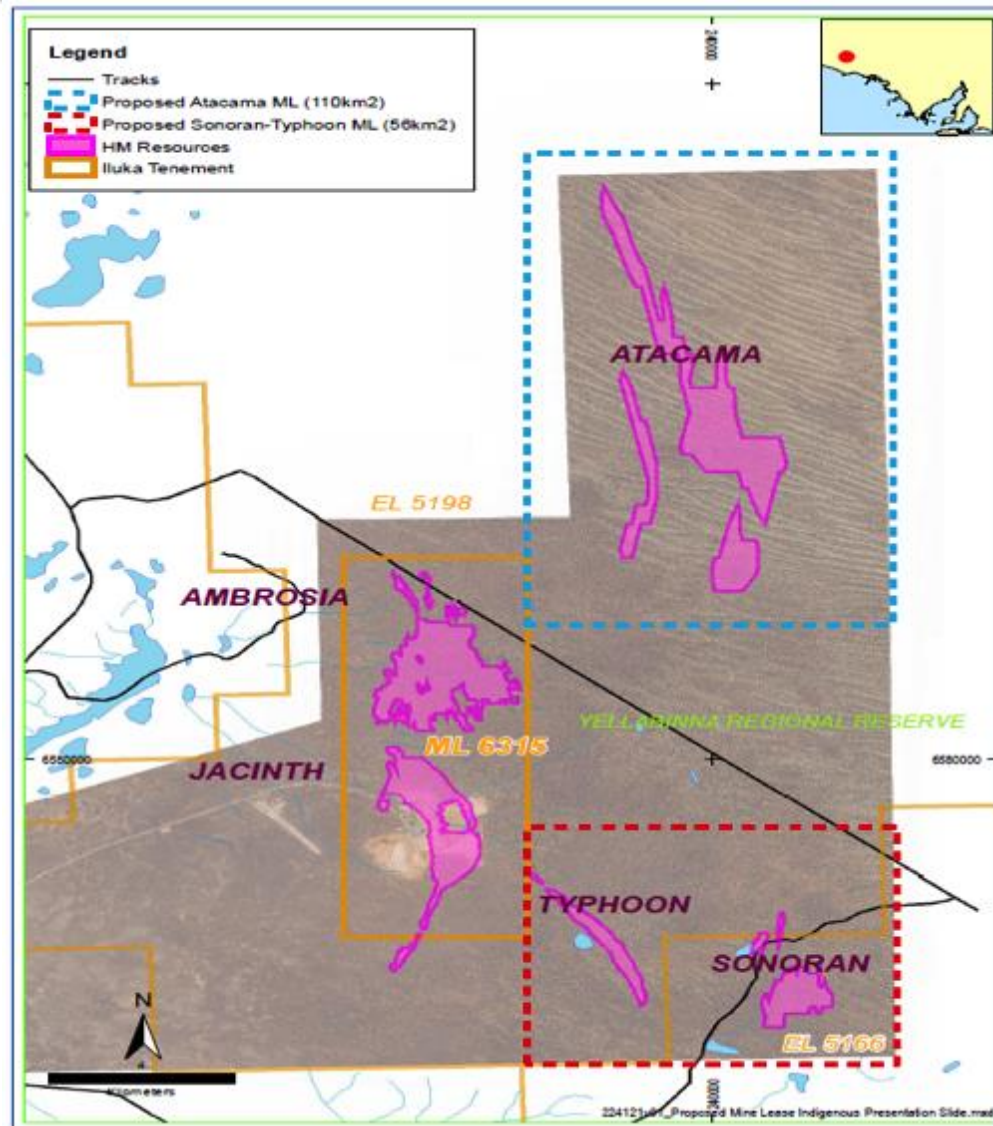
Project	Progress	Next Steps
Hickory	<ul style="list-style-type: none">• DFS completed in December 2012• Pre-execute stage – progress dependent on appropriate commercial arrangements• Design completed and initial vendor bids received• Work on optimising mining, tailing & rehabilitation	<ul style="list-style-type: none">• Secure appropriate commercial arrangements• Construction timeframe – 15 months
Aurelian Springs	<ul style="list-style-type: none">• PFS complete• DFS in progress• Securing mineral and access leases• County permit and other permits being finalised	<ul style="list-style-type: none">• Mining and water quality permits• Secure appropriate commercial arrangements

Areas of Investigation – STA Deposits

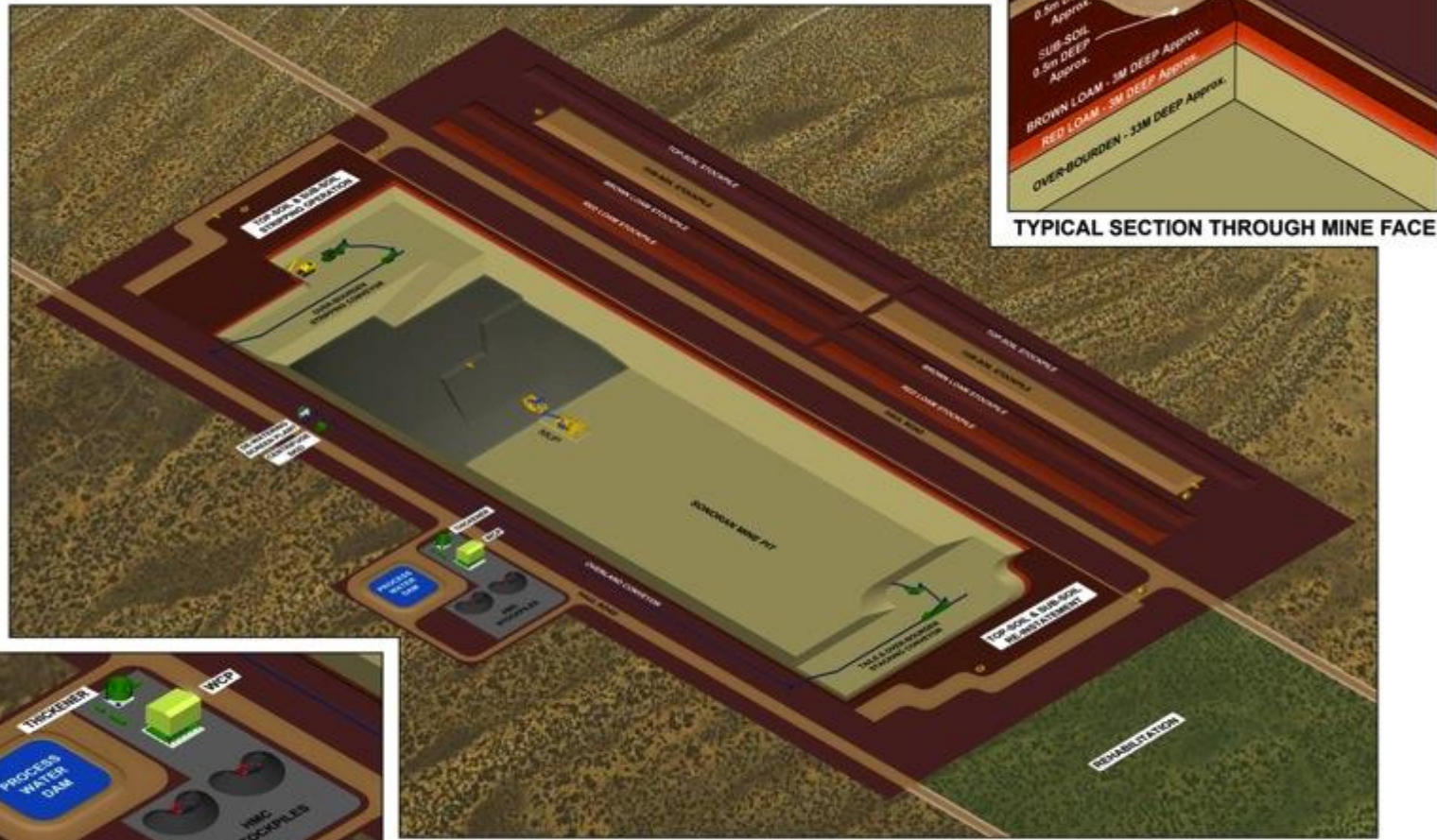
- In mid-2012 the Major Projects team began looking at potential new production options in the Eucla Basin including the following satellite deposits:
 - Sonoran-Typhoon; and
 - Atacama.
- These deposits are immediately adjacent to the Jacinth-Ambrosia mine, and can:
 - use existing J-A infrastructure;
 - provide product production flexibility from J-A; and
 - potentially extend the J-A mine life.



Proposed STA Mining Leases



Sonoran, Typhoon, Atacama Innovative Mining Method



MINE PLANT LAYOUT

EUCLA BASIN - SAT
CONCEPTUAL MINING METHODOLOGY
REV-1
DATE 16/06/14



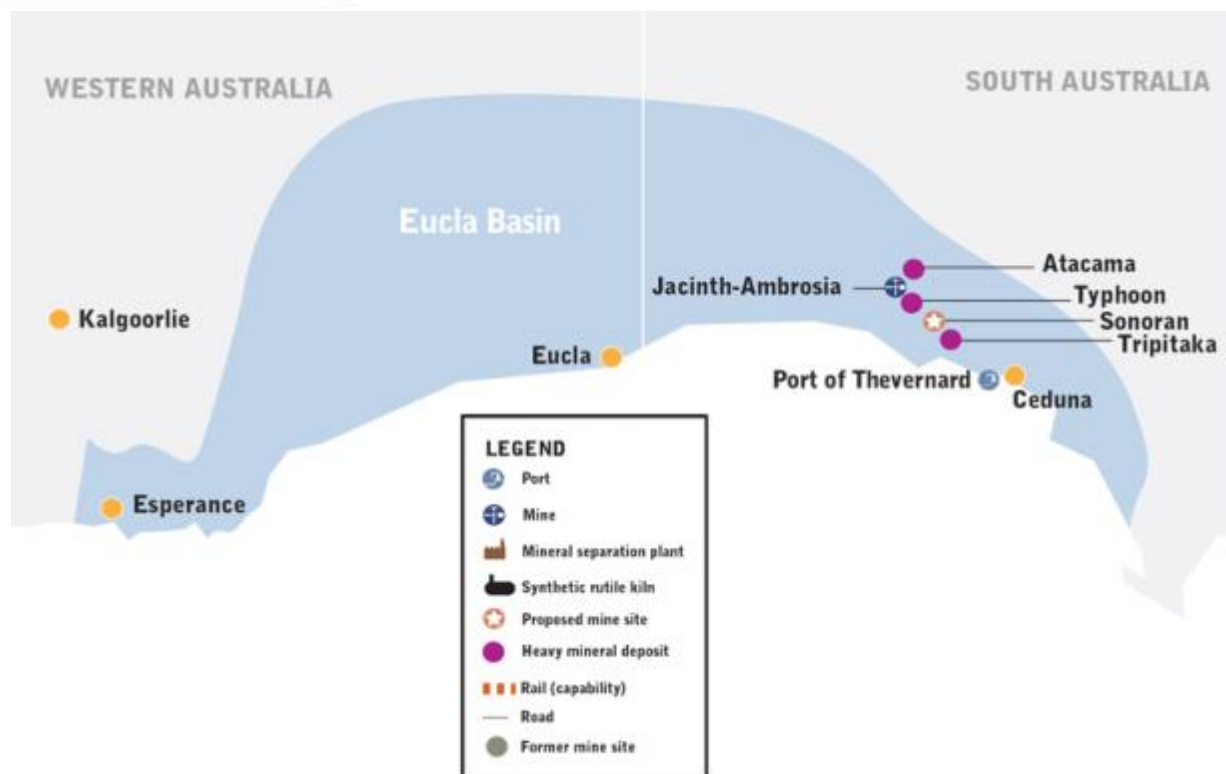
Jacinth-Ambrosia Operation

Scott McQueen, General Manager Commercial, Mineral Sands

Jamie McDonald, Jacinth-Ambrosia Site Manager

Dave Wright, Jacinth-Ambrosia Site Manager

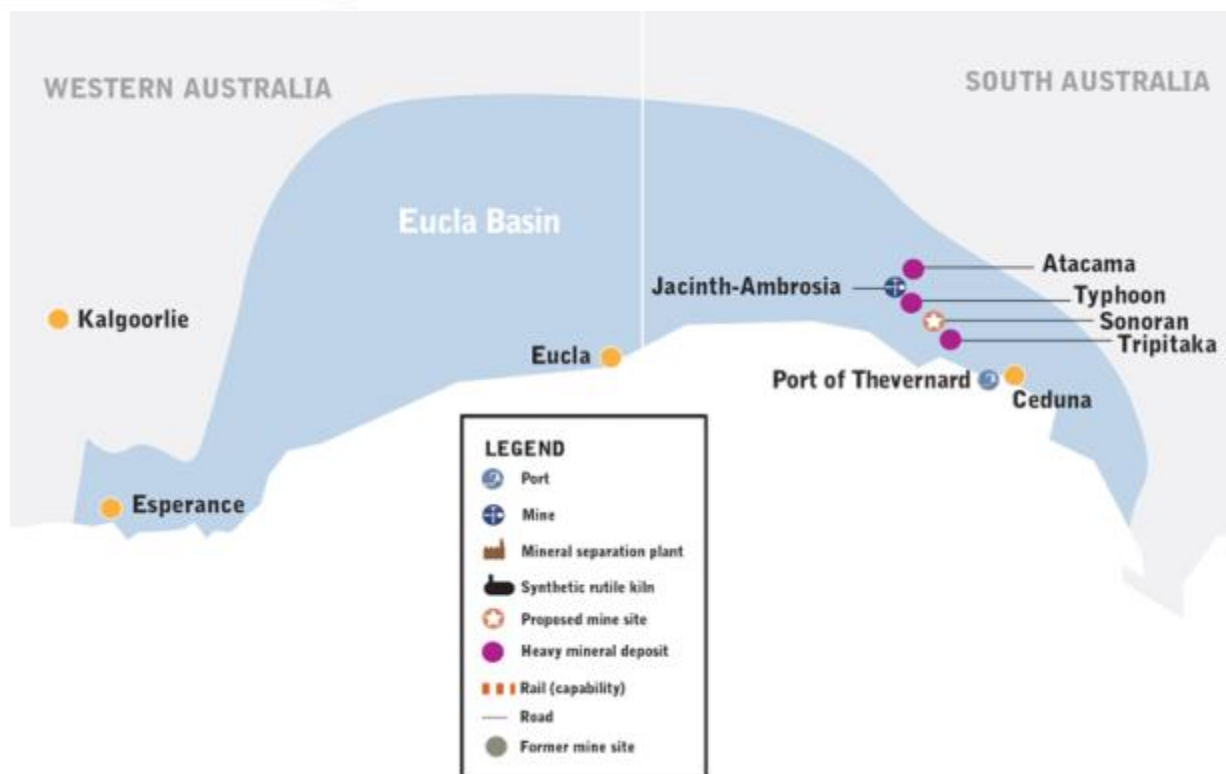
Jacinth-Ambrosia Ore Reserves



JORC 2012 Status (Dec-13)	Ore (Mt)	HM In-Situ (Mt)	Zircon (%)	Ilmenite (%)	Rutile (%)
Ore Reserve - proved	119.7	5.1	51	27	4
Ore Reserve - probable	3.4	0.1	51	20	5
Total	123.1	5.2	51	27	4

Note: Refer to Iluka's Ore Reserves and Mineral Resources Statement 2013, Iluka Annual Report, Page 133-135 and ASX Release on 30 April 2014, "Addendum to 2013 Annual Report".

Jacinth-Ambrosia Satellite Mineral Resources



JORC 2012 Status (Dec-13)	Ore (Mt)	HM In-Situ (Mt)	Zircon (%)	Ilmenite (%)	Rutile (%)
Typhoon – measured	23.7	1.5	13.2	62.7	0.9
Sonoran – indicated	27.0	1.9	17.1	64.2	2.3
Sonoran – inferred	0.5	0.1	35.4	49.4	4.7
Atacama – inferred	110.0	9.9	13.2	68.9	1.8

Note: Refer to Iluka's Ore Reserves and Mineral Resources Statement 2013, Iluka Annual Report, Page 133-135 and ASX Release on 30 April 2014, "Addendum to 2013 Annual Report".

Jacinth-Ambrosia Overview

- Located within Yellabinna and Nullarbor regional reserves
- First operation approved for mining in mixed use reserves within South Australia
- Development capital expenditure: \$390 million (74% in SA / 26% elsewhere)
- Sealed air strip and haul road upgrade: \$10 million
- Total area disturbed by mining and infrastructure - 610 hectares
- Mining commenced in October 2009
- At current ore processing rate Jacinth-Ambrosia economic life through to ~2026



Production Overview – to end June 2014

Metrics	YTD
Ore mined million tonnes	3.9
Ore grade % HM	7.5
HMC produced kt	265
HMC Assemblage %	
• Zircon	55.2
• Rutile	6.3
• Ilmenite	26.5



Scope of Operation

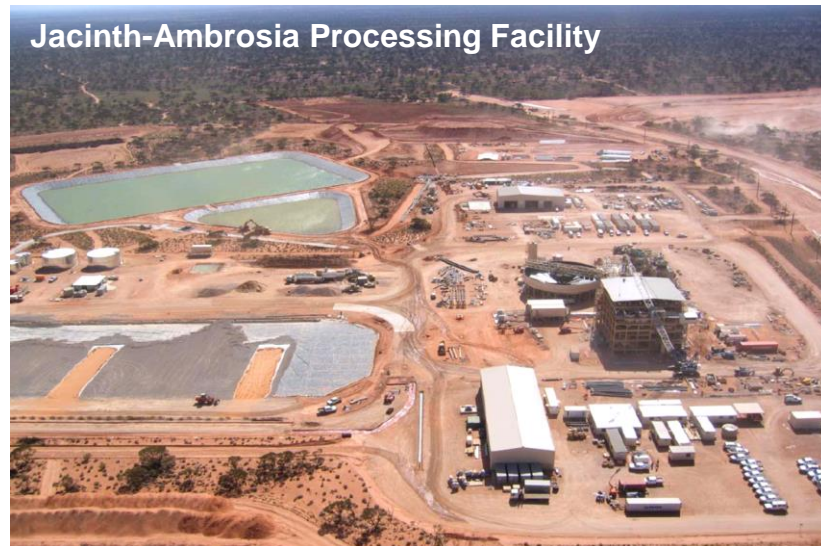
Operational

- Ore body 900m wide by 5 km long
- Low in moisture, no groundwater, strip ratio 0.5:1
- Ore at average thickness of 20 metres
- Mining unit plant in-pit ~1,300tph
- Wet Concentrator ~1,000tph
- HMC transported 270km by sealed road to Thevenard
- Triple road trains - 96 tonne capacity
- 40kt storage bunker at Port of Thevenard

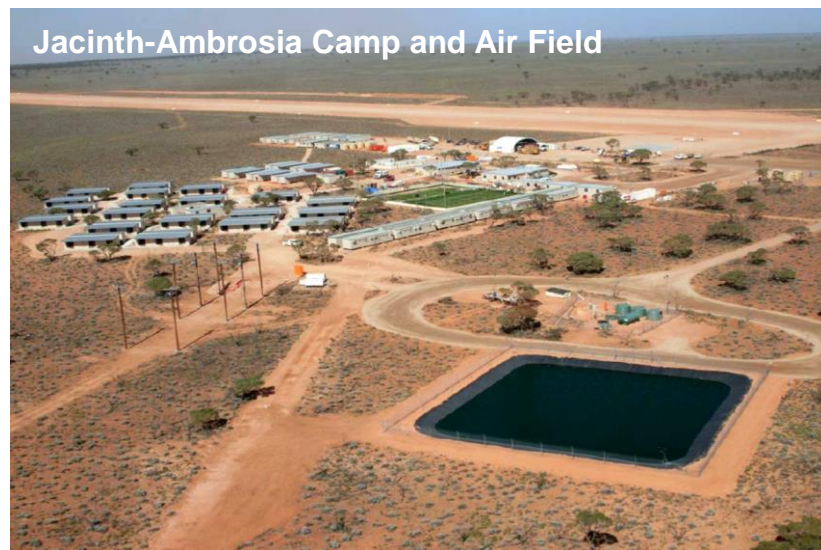
Support

- Accommodation village - 160 persons
- Sealed airstrip landing 33 seater SAAB 340 aircraft
- Water from borefield to site 32 km
- Off-grid diesel power station (6.8 MW)
- SA Ambulance accredited medical facilities
- Reverse osmosis fresh water generation plant

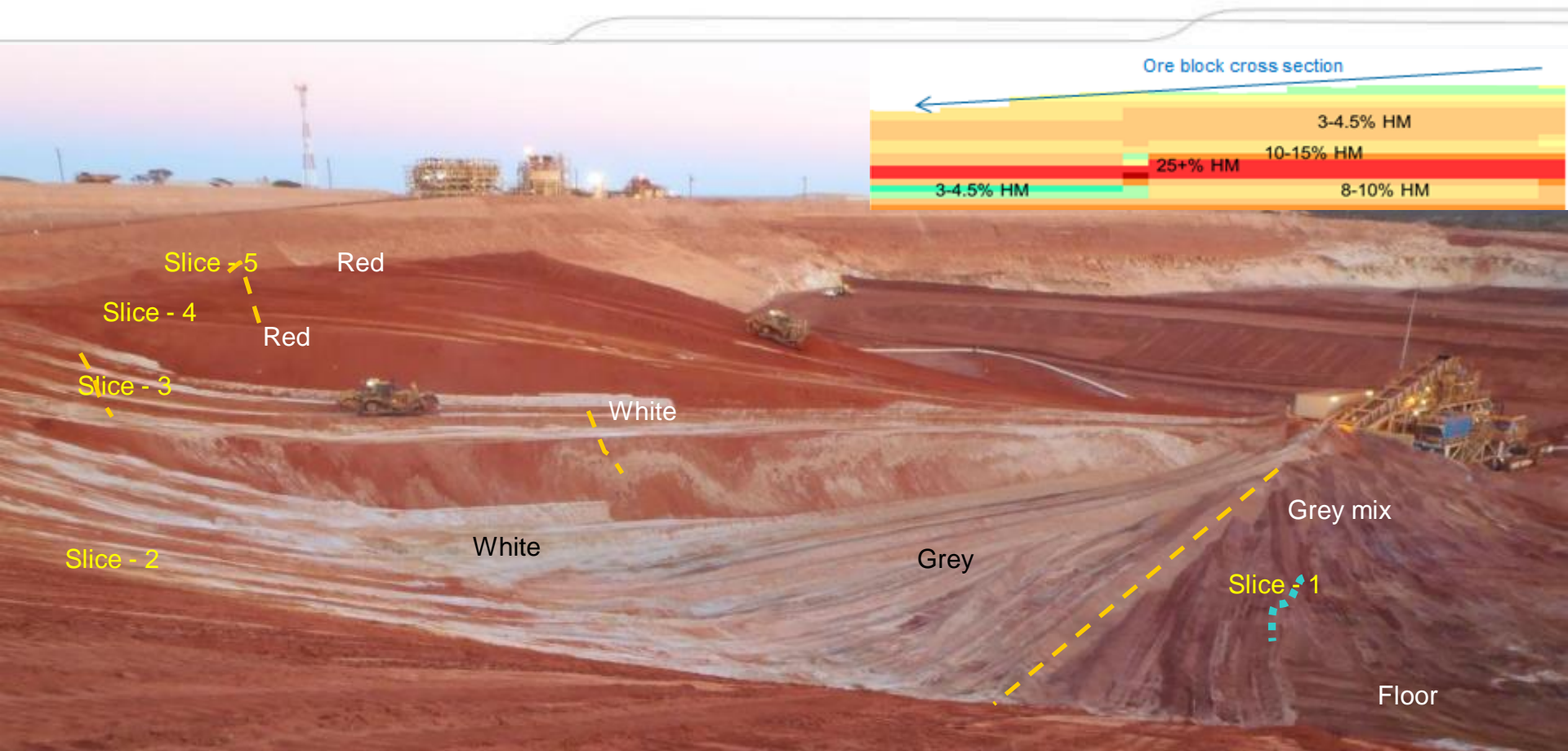
Jacinth-Ambrosia Processing Facility



Jacinth-Ambrosia Camp and Air Field



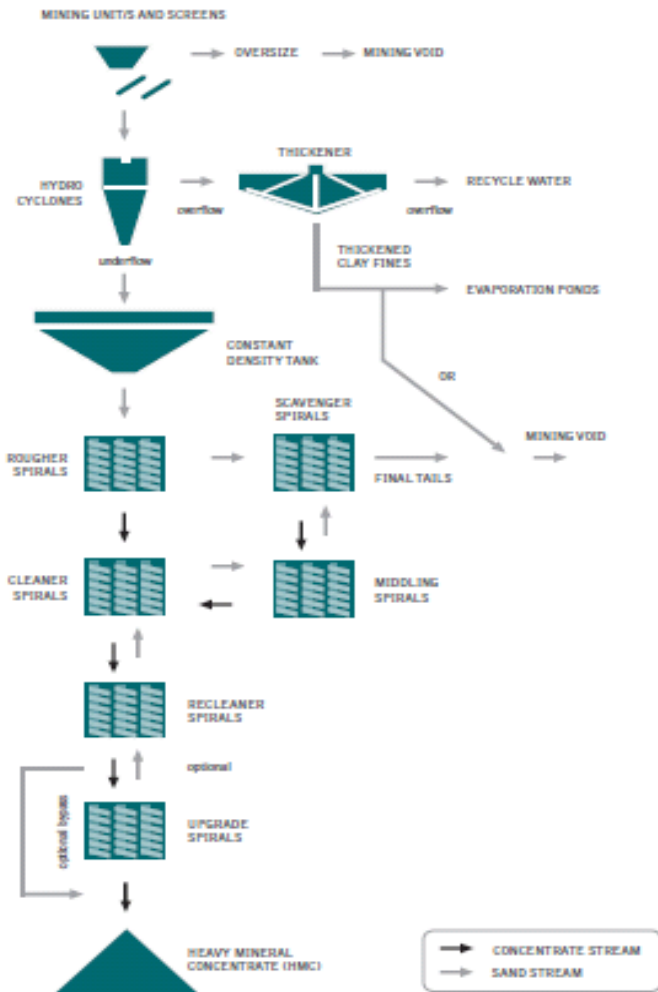
Mining Method



- 150m x 100m ore blocks
- Ore pushed by dozers into mobile mining unit plant dozer trap
- Primary geological grade maintained via blending 'slices' at various grades across ore block
- Mining unit capacity ~1,300 tph, oversize removed
- Ore slurry pumped to wet concentrator plant

2012/04/15

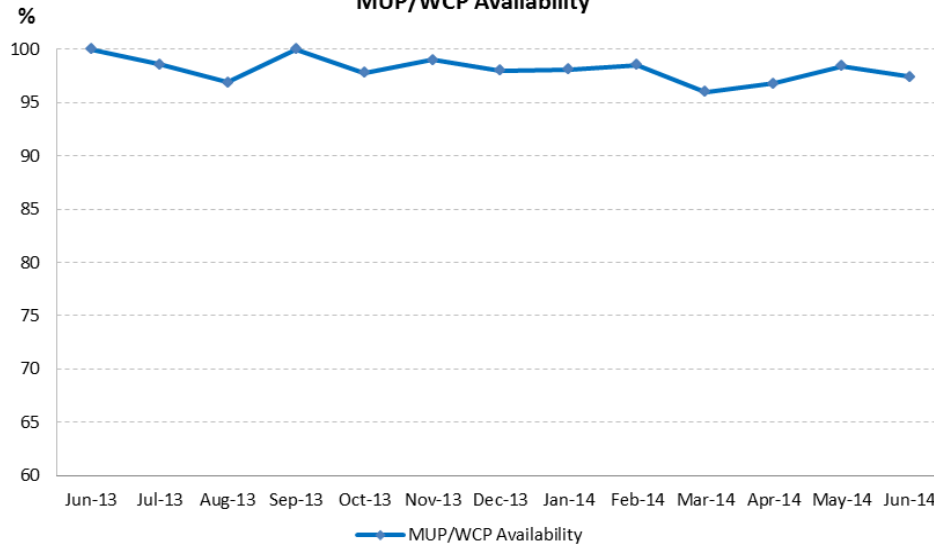
Wet Concentrator



- Cyclones remove slimes from ore slurry (sent to thickener)
- Ore to constant density tank to ensure steady feed to the spiral circuit
- Spiral circuit separates heavy mineral from the sand
- Heavy mineral concentrate stacked for further processing (MSPs)
- Sand tails split into 2 streams:
 - 60% sent to sand stackers in mining void (tail wall construction)
 - 40% mixed with slimes to create ModCod sent to tailings cells

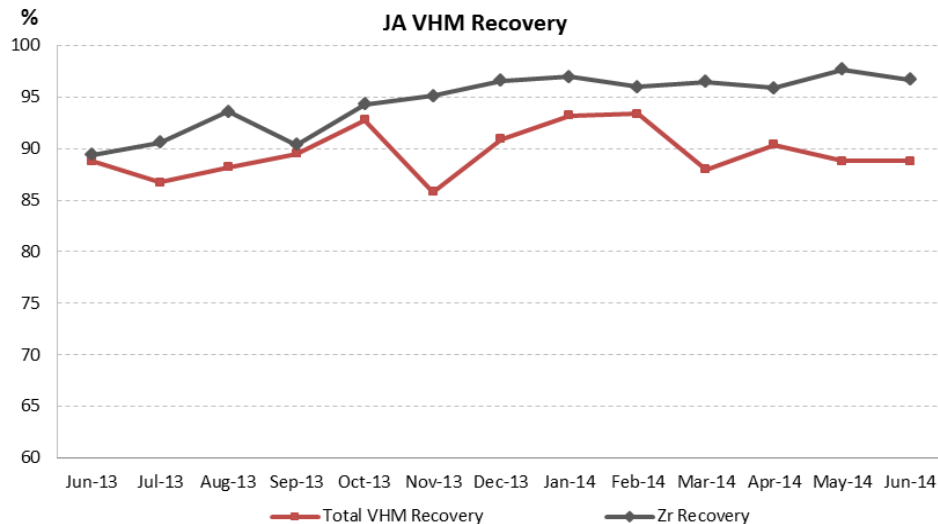
Operational Performance

MUP/WCP Availability



- Risk: MUP downtime \leftrightarrow WCP downtime
- Downtime equals inefficiency
- Consistently high MUP/WCP availability >95%
- Includes maintenance and MUP moves outages

JA VHM Recovery



- Risk: sudden large orebody grade variations
- Focus on in-pit blending for stable WCP feed grade
- Maximise VHM recoveries
- Consistent HMC grade to maximise MSP recovery
- Continuous improvement to standard operations

Logistics

- HMC transported by road to Port of Thevenard
- Fully sealed journey, including 94km mine access
- Utilising purpose built B-Triple 96 tonnes trucks
- Transport provider – Kalari
- 40,000 tonnes HMC storage facility at Port
- Long term contract to utilise ABB / Viterra ship loading facilities at Port of Thevenard
- Charter shuttle vessels to Geraldton/Portland:
 - payload of 20,000 – 30,000 tonnes
 - approximately two week round trips



Jacinth-Ambrosia HMC Processing

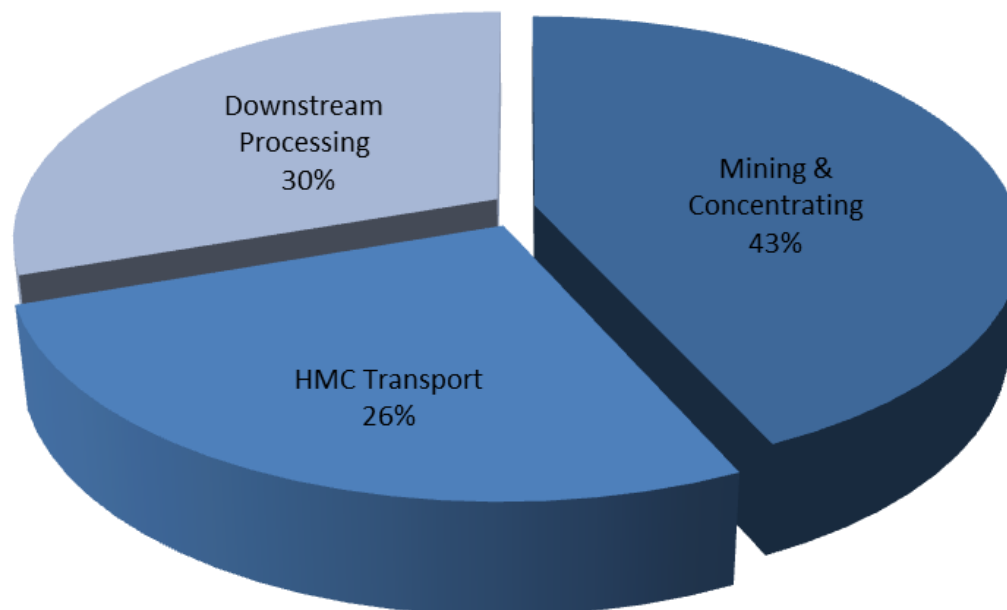
- Processed at both Australian separation plants to optimise throughputs, recovery, quality & unit costs
- Narngulu MSP primarily J-A feed, Hamilton MSP primarily Murray Basin feed with ~30% J-A blend
- J-A HMC processing capacity- ~700 ktpa Narngulu and ~200ktpa Hamilton (30%)
- Current MSP operating parameters - Narngulu ~50% and Hamilton ~80% capacity utilisation
- J-A current annual production capacity ~540kt HMC:
 - ~250ktpa zircon, ~130ktpa chloride Ilmenite and ~30ktpa rutile (includes HyTi 91)



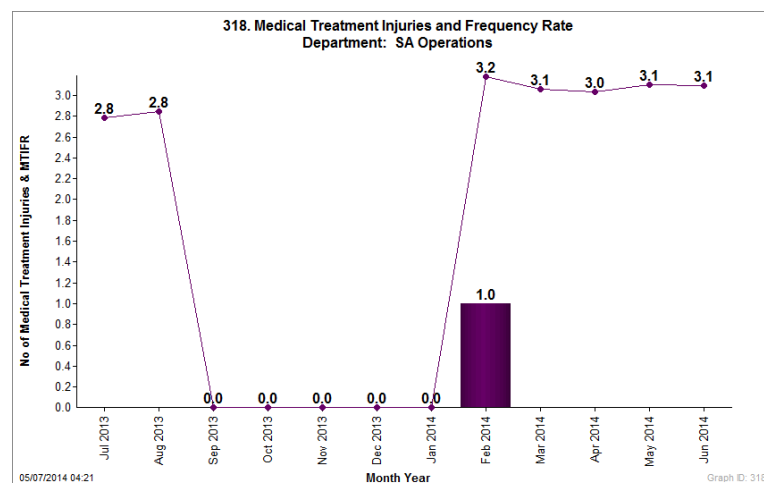
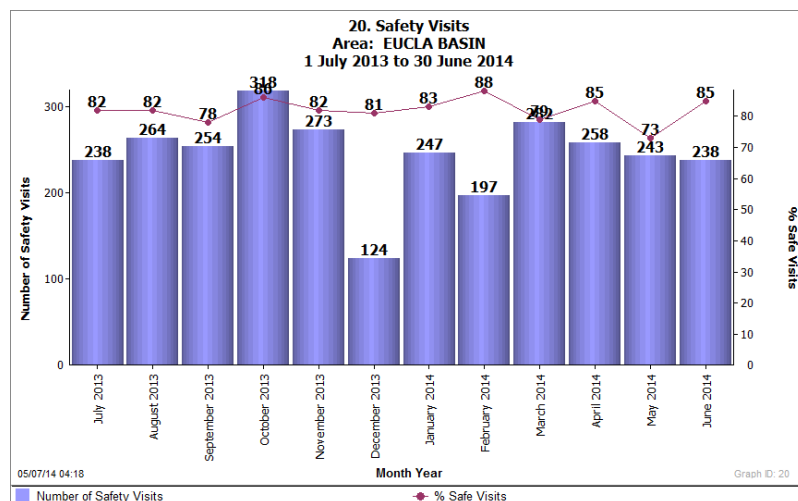
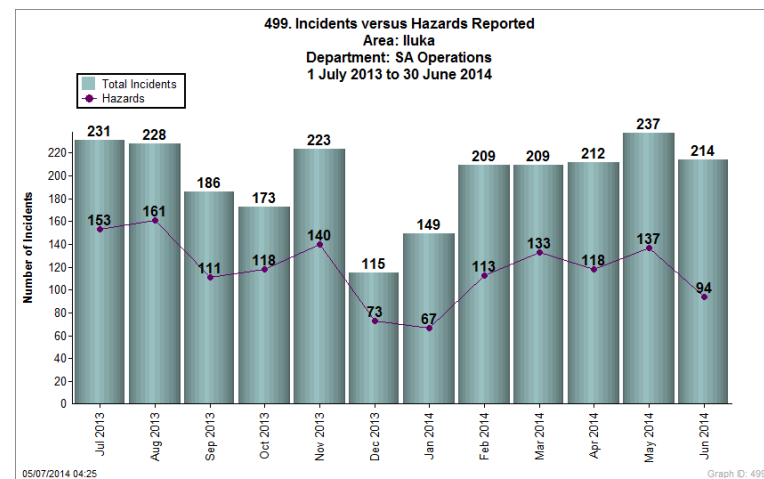
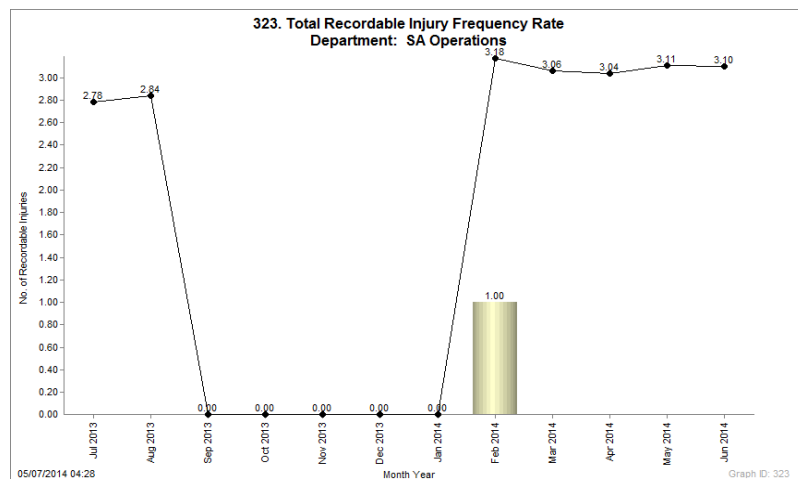
Hamilton mineral separation plant, Victoria

Jacinth-Ambrosia Production Cash Costs

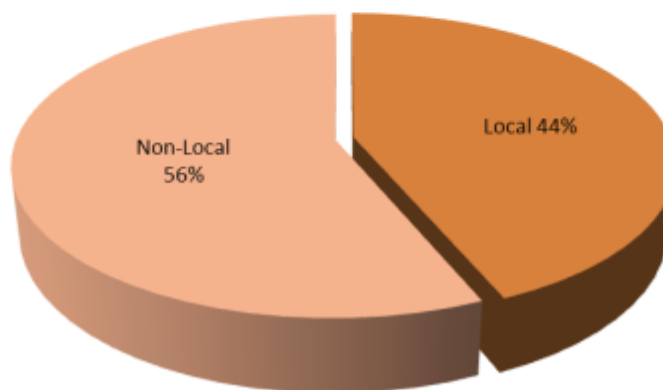
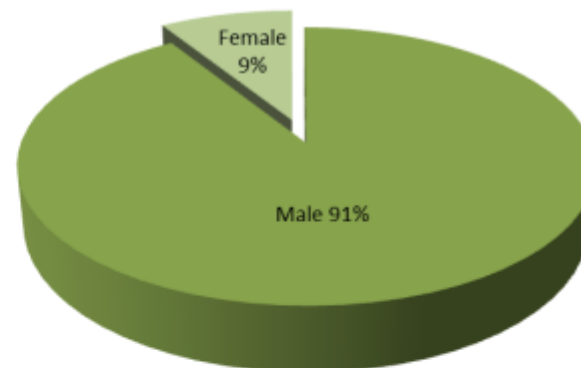
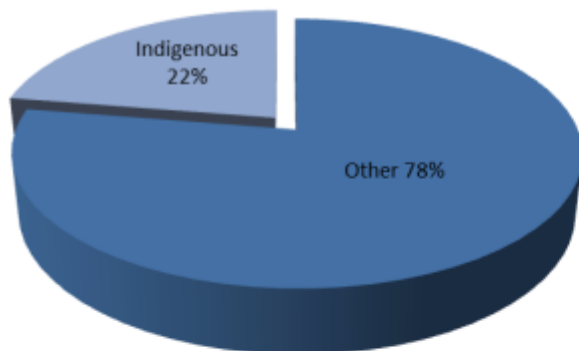
- Jacinth-Ambrosia annual cash cost of production (including downstream separation and support) ~ \$140 million
- Higher proportion of cash production costs incurred post mine gate
- Annual cash production cost levels vary dependent on strip ratio, grade, throughput and other factors
- Low sustaining capital



Sustainability Performance



Workforce Development and Diversity



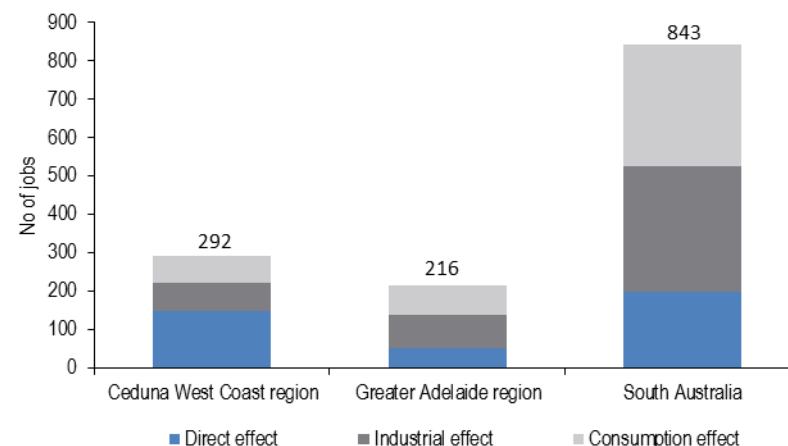
- Total workforce 156 (Iluka 67, contractors 89)
- 20% Far West Coast indigenous employment target (reached and exceeded)
- Strong indigenous and local components. Gender diversity remains a challenge
- Development success stories - indigenous redeployment to other mining companies

South Australian Regional Contribution

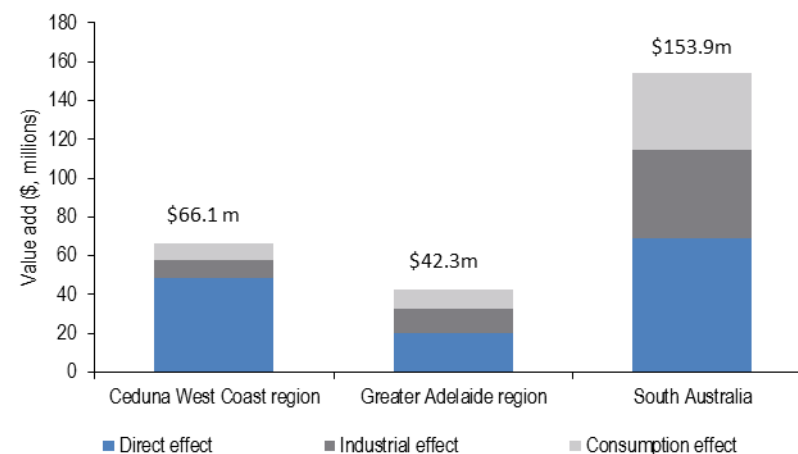
- Jacinth-Ambrosia sole mining operation in region
 - Iluka: 67 employees, 48% local
 - Contractors: 89 employees (mining, logistics & services)
- Economic contribution*:
 - 292 jobs and \$66.1 million in value add to region
 - additional 646 jobs and \$85 million value add to State
- Community investment
 - \$200 thousand since 2009 (e.g. RFDS, Oysterfest)
 - education, business and career development programs
 - Indigenous training, mentoring and workforce participation



Direct and Indirect Employment



Direct and Indirect Value Add

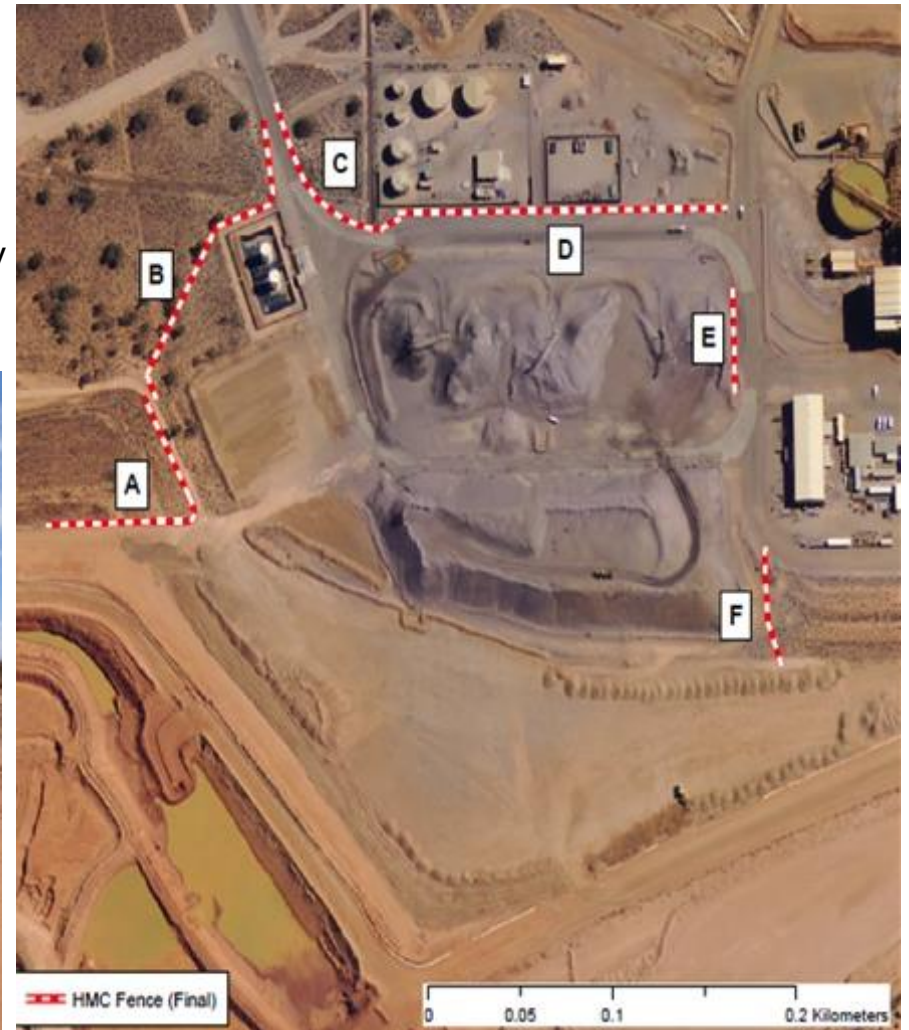


* Data from Ernst & Young based on 2011 Census

Environmental Management

Heavy mineral concentrate containment

- Stockpile management plan developed in 2013
- Containment fence installed Q4 2013
- Semi-permanent stabilisation undertaken routinely
- Geo-bituminous membrane trial in Q3 2014



Environmental Management

Dust emissions from mining

- Three water trucks at site
- RO plant for non-saline water on topsoil areas
- Slimes (clay fines) used to stabilise inactive area's

Port of Thevenard containment

- Sprinkler system installed around enclosed bund
- Continuous improvement regime through GRA
- Increased management effort of 3rd party operators



Land Rehabilitation



Pre-Mining Cell 1 East



2012 Disturbance complete, tails and soil return

- Cell 1 East site represents the initial mining void
- Cell void initial fill with tailings
- Completed backfill, stabilisation, seeding and stick replacement
- Area rehabilitation completed in-line with SA Government Mining and Rehabilitation Plan (MARP)

Land Rehabilitation



2013/2014 Active Rehabilitation

- Favourable rainfall events in 2013 winter have aided plant germination
- Research and study programs targeted at validating alternative profiles to MARP commitments



Supplementary Information

Physical flow data

Iluka Operating Mines - Physical Data 6 Months to 30 June 2014

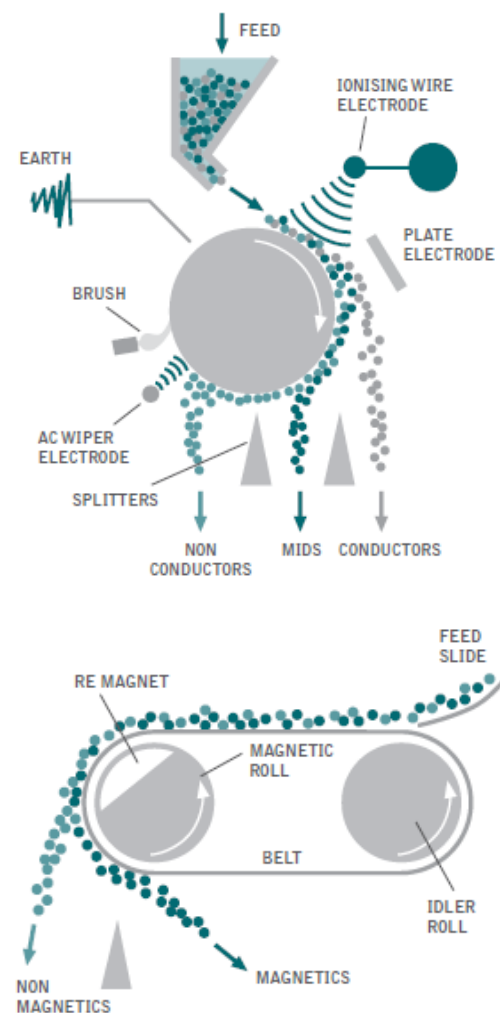
	Jacinth- Ambrosia	Murray Basin	Western Australia	Australia Total	Virginia	Group Total
Mining						
Overburden Moved kbcm	830.0	8,354.4	-	9,184.4	-	9,184.4
Ore Mined kt	3,923.1	1,719.5	-	5,642.6	1,841.6	7,484.2
Ore Grade HM %	7.5	34.5	-	15.7	5.9	13.3
VHM Grade %	6.7	31.5	-	14.3	4.7	11.9
Concentrating						
HMC Produced kt	265.0	299.0	-	564.0	112.3	676.3
VHM Produced kt	234.6	267.9	-	502.5	79.8	582.3
VHM in HMC Assemblage %	88.5	89.6	-	89.1	70.9	86.1
Zircon	55.2	25.1	-	39.2	15.9	35.4
Rutile	6.3	39.3	-	23.8	-	19.9
Ilmenite - Saleable & Upgradeable	26.5	24.2	-	25.3	54.9	30.2
HMC Processed kt	203.1	160.8	5.2	369.1	111.1	480.2
Finished Product kt						
Zircon	106.4	38.5	13.4	158.3	15.7	174.0
Rutile	13.9	64.2	-	78.1	-	78.1
Ilmenite - Saleable & Upgradeable	45.2	122.5	-	167.7	59.1	226.8
Synthetic Rutile Produced kt			-	-		-

An explanation of the Iluka's physical flow information can be obtained from Iluka's Briefing Paper - Iluka Physical Flow Information on the company's website www.iluka.com, under Investor Relations, Mineral Sands Briefing Material (2010). The nature of the Iluka operations base means that HMC from various mining locations can be processed at various mineral separation plants.

Mineral Separation Process

MSPs separate minerals based on differences in conductivity and magnetism

Form of Titanium	TiO ₂ %	Magnetic Susceptibility	Electrical Conductivity	Specific Gravity
Ilmenite - Sulphate - Chloride	52 - 54 58 - 62	High	High	4.5 - 5.0
Rutile	95 - 97	Low	High	4.2 - 4.3
Synthetic Rutile	88 - 95			
Leucoxene	70 - 91	Semi	High	3.5 - 4.1
Zircon	N/A	Low	Low	4.7
Monazite	N/A	Semi	Low	4.9 - 5.3
Staurolite	N/A	Semi	Low	3.6 - 3.8
Kyanite	N/A	Low	Low	3.6 - 3.7
Garnet	N/A	Semi	Low	3.4 - 4.2
Quartz	N/A	Low	Low	2.7
Cassiterite	N/A	Low	High	7.0

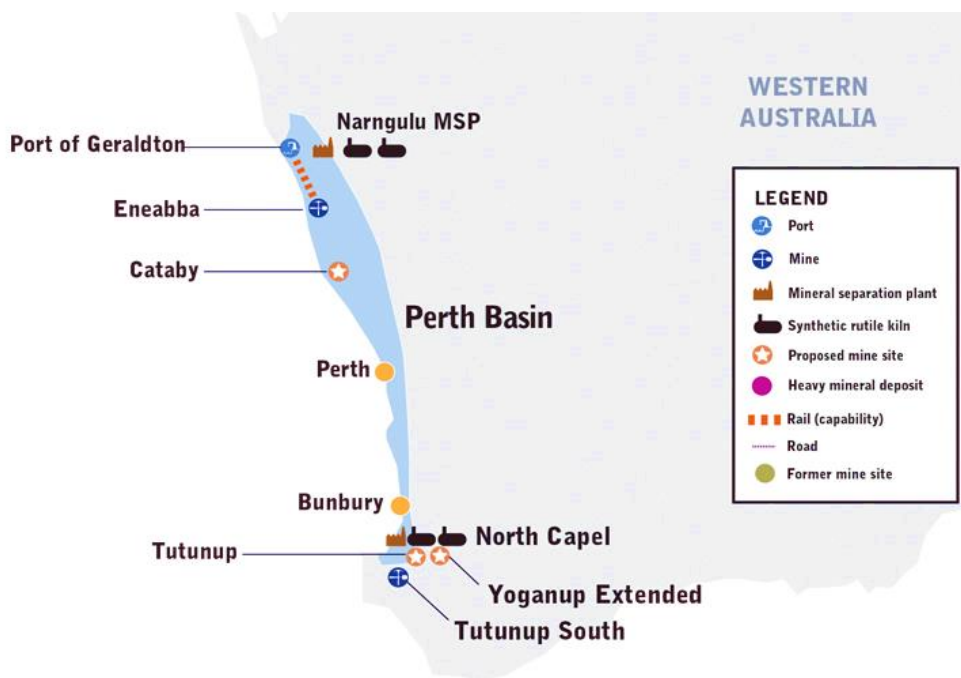


- Divided into seven circuits
- Gravity, electrostatic and magnetic separations repeated throughout to achieve quality targets

- Finished products:
 - zircon premium
 - zircon standard
 - rutile 95
 - rutile 92
 - ilmenite
 - tin

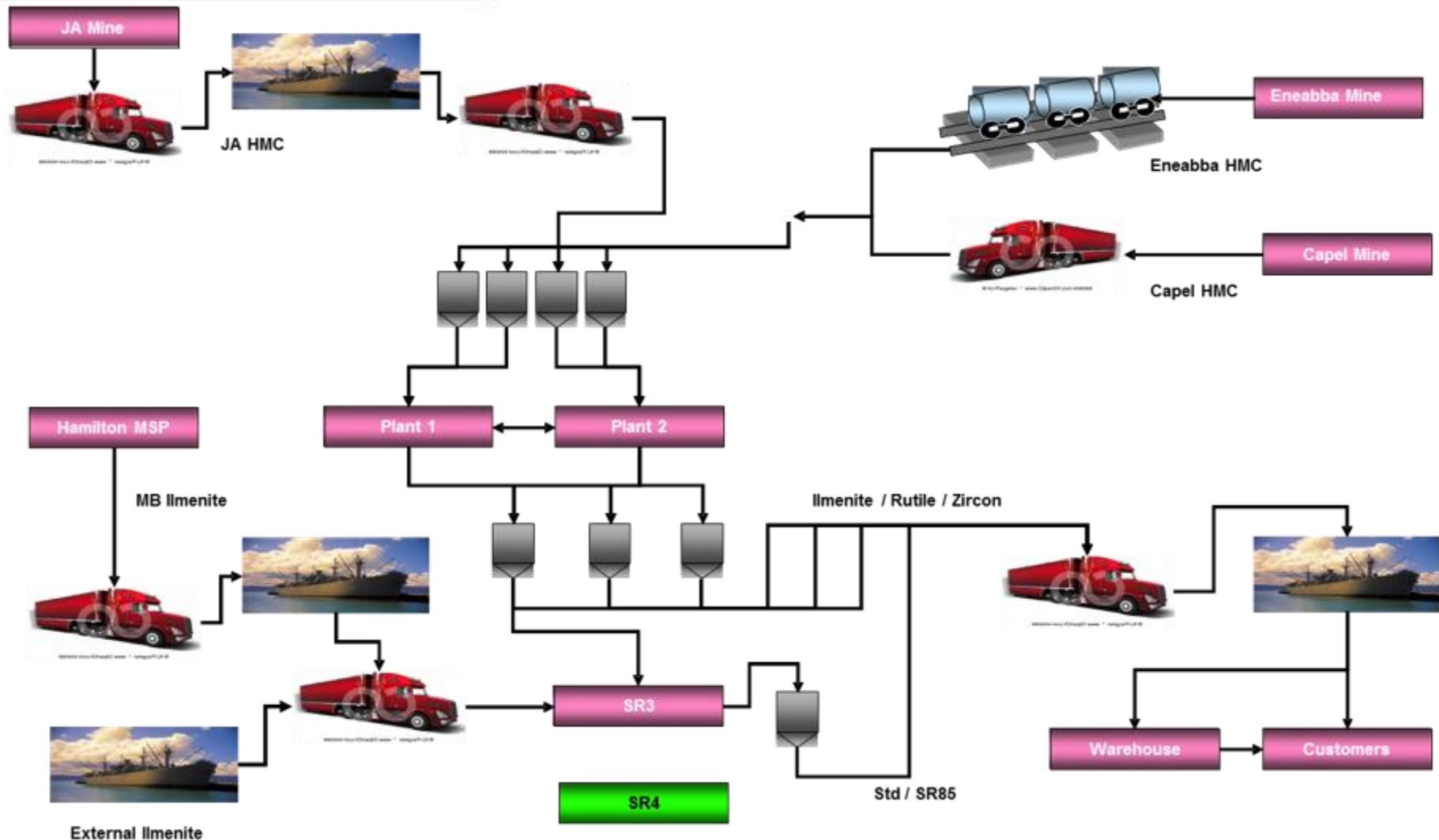


Western Australian Operations - Overview



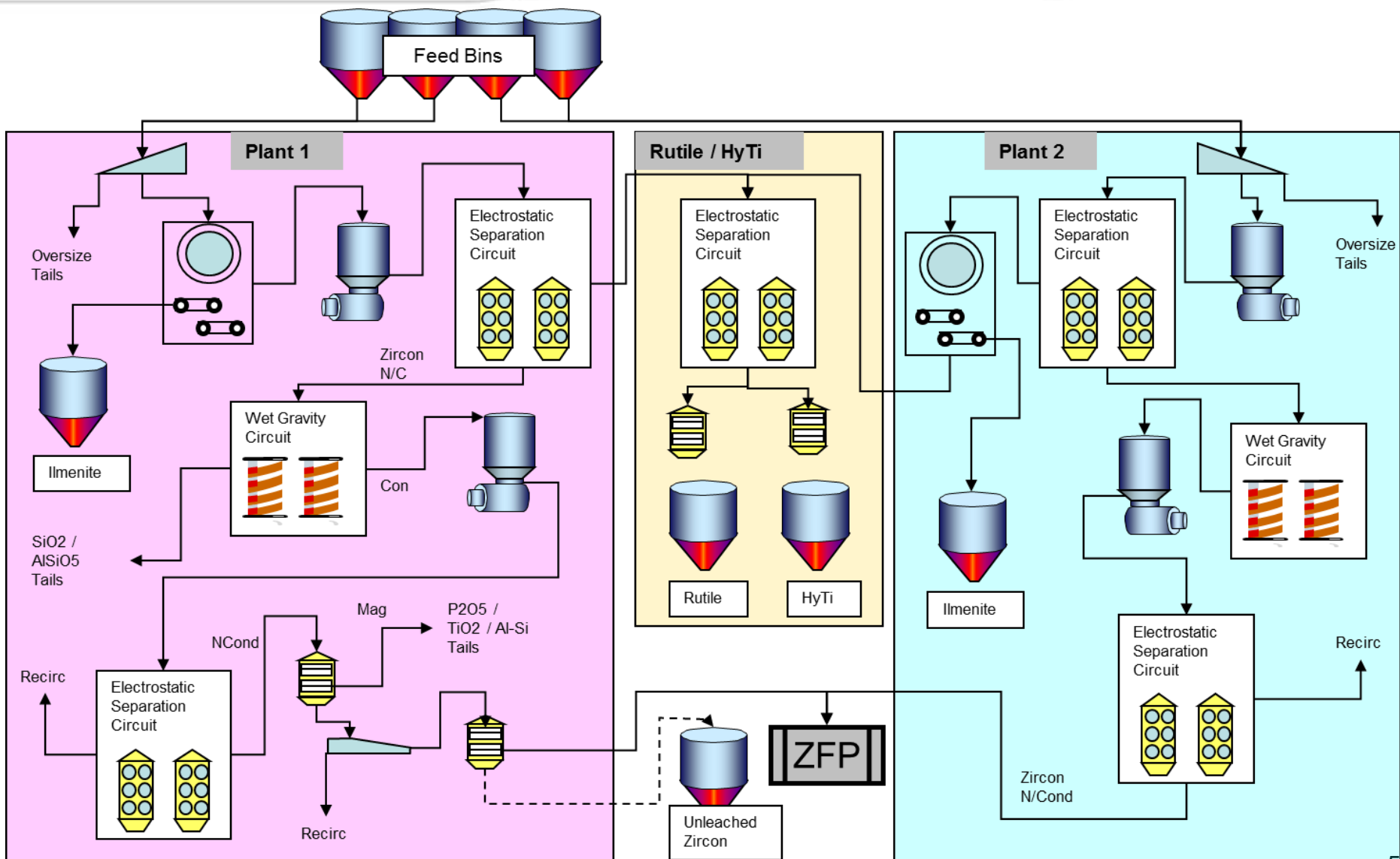
- Two sites (Geraldton and Capel)
- Narngulu MSP processes J-A HMC producing
 - premium zircon
 - zircon in concentrate
 - chloride ilmenite
 - HyTi 91
- 4 synthetic rutile kilns capacity
 - 2 Mid West
 - 2 South West
- Tutunup South mine (currently idled)
- Additional deposits - Cataby, Eneabba, Tutunup
- 600kt+ per annum iron concentrate sales

Narngulu MSP Logistics Overview

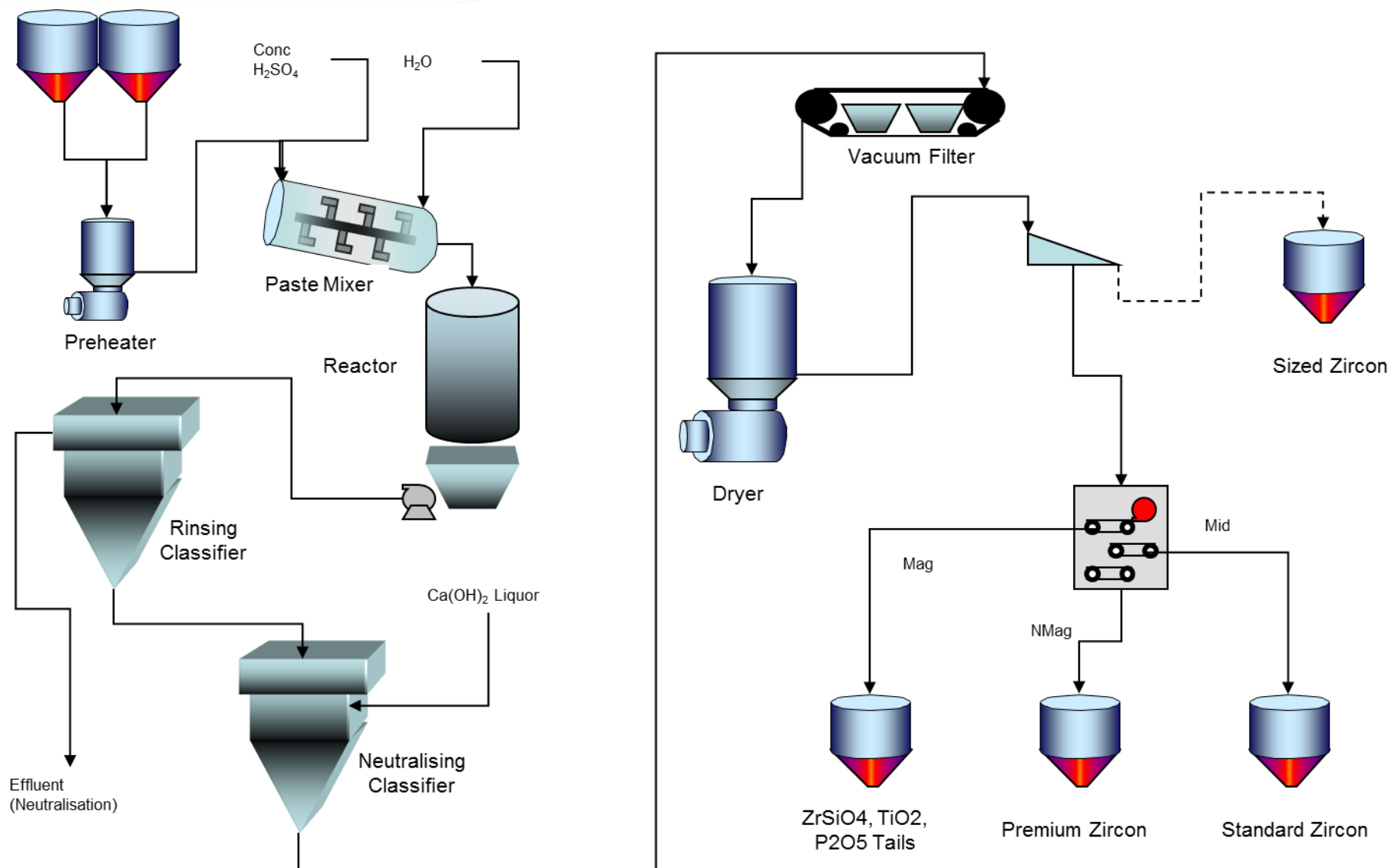


(Feed stock and finished goods)

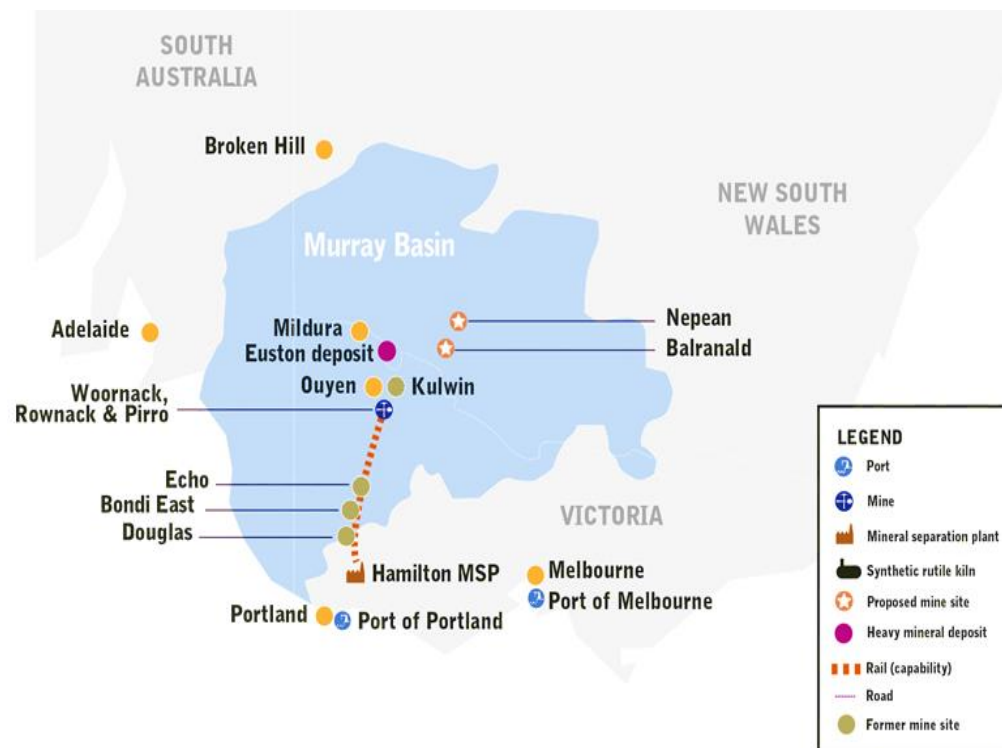
Narngulu MSP Plant 1 and Plant 2



Narngulu Zircon Finishing Plant (ZFP)



Murray Basin - Overview



- Hamilton Mineral Separation Plant processes WRP/J-A HMC producing
 - premium zircon
 - standard zircon
 - rutile 95
 - ilmenite
- Woornack, Rownack, Pirro mine
- Additional deposits – Balranald, Nepean, Euston

Northern Murray Basin Deposits, Victoria

- Kulwin commenced mining June 2009 /completed June 2012
- Woornack, Rownack, and Pirro (WRP) mining commenced October 2011

Mine	Length (km)	Average width (m)	Average ore thickness (m)
Woornack	16.5	115 – 130	5 - 6
Rownack	8.0	50 - 85	2 - 4
Pirro	10.5	70 – 90	4 - 5



Murray Basin: WRP - Scope of Operations

- Three WRP deposits mined, 6 pits in total
- Average dewatering rate of 18 ML/d (5 to 36ML/d)
- Mining unit plant out of pit: 500tph
- Wet concentrator (WCP): 250tph
- HMC production: 60tph
- Water transported from GWM pipeline to site 7km
- Mains power
- HMC transported 95kms by road to Hopetoun rail facility
- B -Double 51-tonne trucks, approx. 30 per day
- HMC transported by rail from Hopetoun to Hamilton mineral separation plant
- Final product shipped from Portland
- Workforce live locally or drive-in-drive-out
- Accommodation village accommodates 185 persons
- Full time employees at WRP - 179 (Iluka 66, Watpac 113)
- Land – approx. 40% Iluka, 60% private landowners and State Government



WRP Processing Facility & TSF

Murray Basin Operations - Mining

- Mine 3.5mt of ore and 8.8 million cubic metres of waste per annum
- Strip ratio - 9.4
- Scrapers on waste removal and truck and digger fleet primarily on ore
- Planned area disturbed by mining and infrastructure – 1,330ha (incl. 205ha of native vegetation)



WRP Operations – Blending Ore



- Ore mined in discrete 100m long in pit blocks and sent to ROM as a specific parcel
- Single Pirro stockpile (lower HM, higher clay), two Woorack stockpiles (higher HM, lower clay)
- Ore loaded into mining unit hopper by front end loader
- Loader can blend from one or more discrete stockpiles to provide required feed grade

WRP Operations - Processing

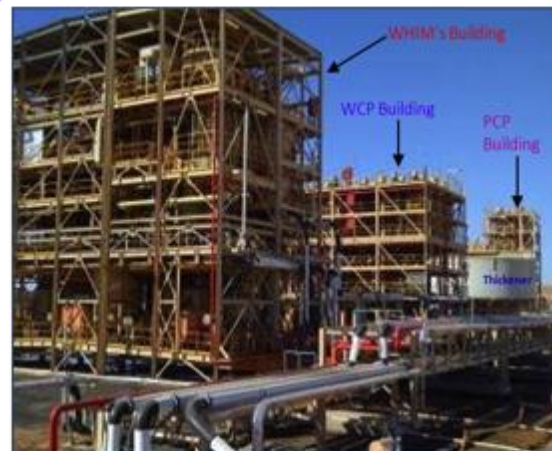
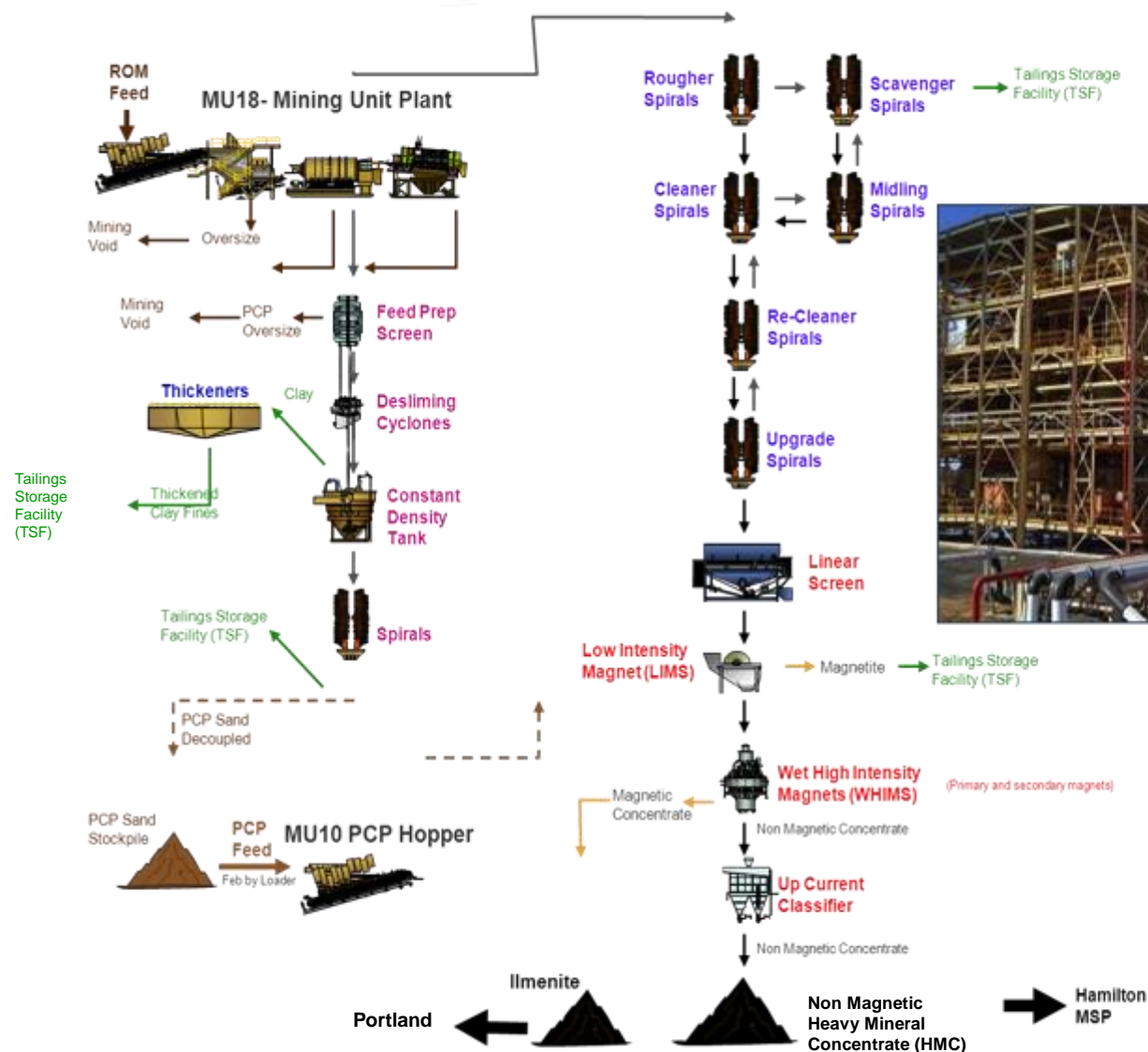
MU18- Mining Unit Plant



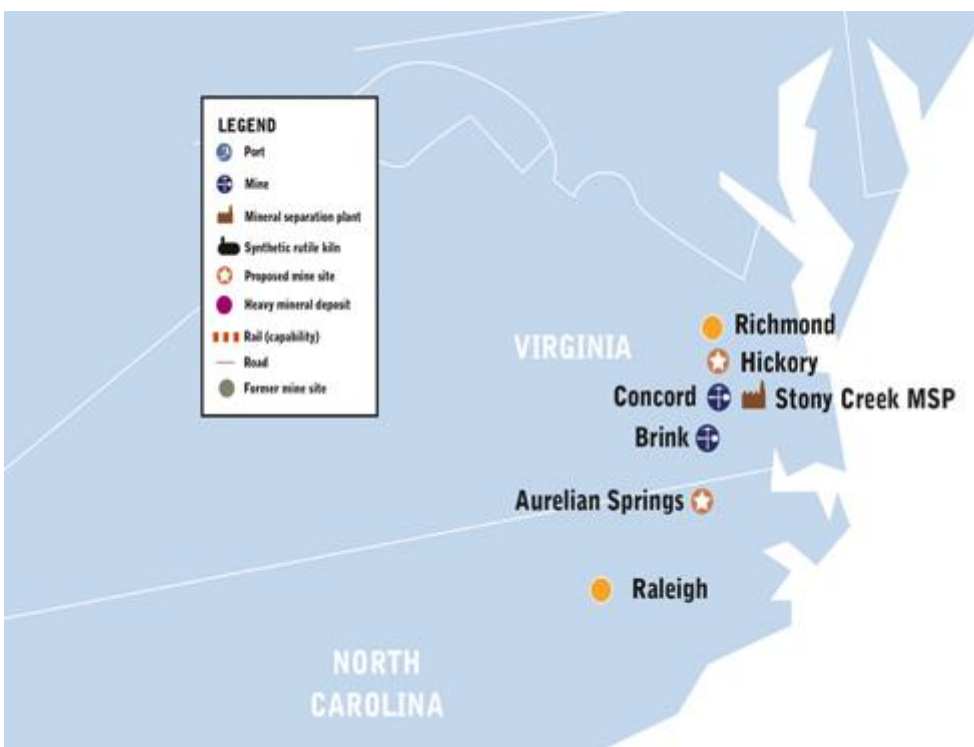
Wet Concentrator Plant



Mining and Concentrating Process



Virginia USA – Overview



- Stony Creek MSP processes Brink HMC producing
 - ultra grade zircon
 - premium zircon
 - chloride ilmenite
- Brink mine
- Concord mine (idled)
- Additional deposits – Hickory and Aurelian Springs

US Operations Overview

Concord Mine Site (Sussex and Dinwiddie Counties)

- Commissioned in 1997
- 3.3mt of ore mined per annum
- Idled in April 2014, with ore remaining to be mined

Brink Operations (Greensville County)

- Commissioned in 2009
- 3.3Mt of ore mined per annum
- Current ore reserves forecast to be exhausted in 2016

Mineral Separation Plant at Stony Creek (Sussex County)

- Capacity to treat ~450kt of HMC
- Capacity to produce ~300kt ilmenite and ~45kt zircon
- Centre of US operational support and US Laboratory

US Operations - Mining Process

Mining Summary

- Mining Unit (MUP) capacity of ~ 500tph
- Unit designed around ease of mobility
- Innovative shredder concept utilized
- Low cost mining method
- Minimal overburden removal

Concentrating Summary

- Concentrator capacity of ~260tph Rougher Head Feed (RHF)
- 4 stage spiral separation circuit with Attritioner & Hydrosizer circuit to complete upgrade process

Current focus areas

- Runtime improvement +90% target
- Brink recovery improvement program
- Mining contract productivity review



US Operations – Mineral Separation Plant

Mineral Separation Plant Summary

- Feed rate of ~55tph
- Feed capacity ~450kt HMC pa
- Ilmenite production ~300kt pa
- Zircon Production ~45kt pa



Jacinth-Ambrosia Land Rehabilitation



Rehabilitation research

- Imperative to share research outcomes across the broader community to assist in rehabilitation efforts and promote open dialogue and learning within the mining industry
- 2013 site visit to Jacinth-Ambrosia as part of the Australian Mining Rehabilitation Conference
- Partnership with Australian Research Council (ARC) and University of Adelaide:
 - water and roots in soils in arid lands
 - inform best practice in reconstructing soils and vegetation
- Other priority areas
 - salinity migration
 - soil management
 - root mapping
 - bullock bush growth trials



Dr Emma Steggles (UofA), Dr Melanie Schneemilch (UQ), Angela Chilton (UNSW) and Con Miller (Iluka) collecting soil samples at Jacinth-Ambrosia for the UQ BSC project.



Sap flow meters and deep root species identification, ARC grant.

Western Australia - Land Rehabilitation

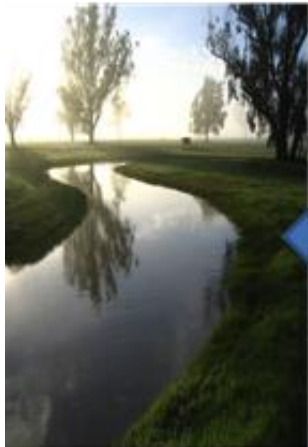
Rehabilitation at Tiger Gully River, Yoganup



Existing River Pre mining



Post Mining re-establishment; Earthworks



Re-established



Erosion Control Techniques

Murray Basin - Land Rehabilitation

Rehabilitation at Douglas, Victoria



US – Virginia Land Rehabilitation



- ~1,600 acres of reclamation completed over the life of Virginia Operations
- ~2,000 acres of disturbed open area requiring rehabilitation
- Long term partnership with Virginia Tech, with annual funding provided
 - focus on improving rehabilitation methods to improve cropping productivity
 - 90 acre research farm established in 2004
 - pine reforestation study
 - topsoil study



ILUKA

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