## Whitehaven Coal Limited

PRESENTATION AT CURRAN & CO

**Australia's Leading High-Quality Coal Company** 



## **Disclosure**

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ALL DOLLARS IN THE PRESENTATION ARE AUSTRALIAN DOLLARS UNLESS OTHERWISE NOTED.

#### COMPETENT PERSONS STATEMENT

INFORMATION IN THIS REPORT THAT RELATES TO COAL RESOURCES AND COAL RESERVES IS BASED ON AND ACCURATELY REFLECTS REPORTS PREPARED BY THE COMPETENT PERSON NAMED BESIDE THE RESPECTIVE INFORMATION. GREG JONES IS A PRINCIPAL CONSULTANT WITH JB MINING SERVICES. PHILLIP SIDES IS A SENIOR CONSULTANT WITH JB MINING SERVICES. BEN THOMPSON IS A GEOLOGIST WITH WHITEHAVEN COAL. JOHN ROGIS IS A GEOLOGIST WITH WHITEHAVEN COAL. RICK WALKER IS A GEOLOGIST WITH WHITEHAVEN COAL. GRAEME RIGG IS A FULL TIME EMPLOYEE OF RUNGEPINCOCKMINARCO LTD. DOUG SILLAR IS A FULL TIME EMPLOYEE OF RUNGEPINCOCKMINARCO LTD. SHAUN TAMPLIN IS A FULL TIME EMPLOYEE OF TAMPLIN RESOURCES PTY LTD. JAMES SMITH IS A SENIOR MINING ENGINEER WITH WHITEHAVEN COAL. MICHAEL BARKER IS A FULL TIME EMPLOYEE OF PALARIS LTD.

NAMED COMPETENT PERSONS CONSENT TO THE INCLUSION OF MATERIAL IN THE FORM AND CONTEXT IN WHICH IT APPEARS. ALL COMPETENT PERSONS NAMED ARE MEMBERS OF THE AUSTRALIAN INSTITUTE OF MINING AND METALLURGY AND/OR THE AUSTRALIAN INSTITUTE OF GEOSCIENTISTS AND HAVE THE RELEVANT EXPERIENCE IN RELATION TO THE MINERALISATION BEING REPORTED ON BY THEM TO QUALIFY AS COMPETENT PERSONS AS DEFINED IN THE AUSTRALIAN CODE FOR REPORTING OF EXPLORATION RESULTS. MINERAL RESOURCES AND ORE RESERVES (THE JORC CODE, 2012 EDITION).

#### ADDITIONAL INFORMATION

ANY REFERENCES TO RESERVE AND RESOURCE ESTIMATES SHOULD BE READ IN CONJUNCTION WITH THE WHITEHAVEN'S ORE RESERVES AND COAL RESOURCES STATEMENT FOR ITS COAL PROJECTS AT 31 MARCH 2016 AS RELEASED TO THE AUSTRALIAN SECURITIES EXCHANGE ON 15 AUGUST 2016. WHITEHAVEN CONFIRMS IN SUBSEQUENT PUBLIC REPORTS THAT IT IS NOT AWARE OF ANY NEW INFORMATION OR DATA THAT MATERIALLY EFFECTS THE INFORMATION INCLUDED IN THE RELEVANT MARKET ANNOUNCEMENT AND IN THE CASE OF ESTIMATES OF COAL 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.



## **Agenda**

- About Whitehaven Coal
- World and Asian Coal Demand Growth
- How Whitehaven Benefits
- Outlook
- Appendices



## Whitehaven as a Business

## AUSTRALIAN LISTED COAL MINER PRODUCING PREMIUM COALS FROM THE GUNNEDAH BASIN IN NEW SOUTH WALES

- Whitehaven Coal is the largest independent coal miner in Australia, producing and selling more than
   21 Mtpa
- Long life, low cost, tier one mines with world class reserves and increasing met coal production
- Profitable at cycle lows
- Moving to strong free cash flows
- Leveraged to regulatory change and technology
- Holding a dominant position in the only emerging high quality coal basin in Australia

#### **ASX Code: WHC**

- 1,026 million shares on issue
- Market Cap \$A2.8 billion
- Trading 145 million shares per month

#### **Whitehaven Operations**

 Narrabri U/G mine, Maules Creek, Werris Creek, Tarrawonga and Rocglen O/C mines

#### Costs

Unit costs in the first quartile of the cash curve

#### **Shareholders**

<ul><li>Farallon</li></ul>	16.6%
<ul><li>AMCI Group</li></ul>	16.1%
<ul><li>Eastspring</li></ul>	6.9%
<ul> <li>Australian Institutions</li> </ul>	22.2%



## Whitehaven's Operations

THE LARGEST PRODUCER IN THE GUNNEDAH BASIN

**Developing and operating mines since 1999** 

#### **Current Operations**

- Maules Creek (75%) Tier One Mine
- Narrabri (70%) Tier One Mine
- Tarrawonga (70%)
- Werris Creek (100%)
- Rocglen (100%)
- Gunnedah CHPP (100%)

#### **Development Assets**

- Vickery (100%)
- Various early stage development assets in Queensland and NSW



WHITEHAVEN COAL

## **Coal Sales and Production**

#### QUADRUPLED MANAGED SALES AND SALEABLE COAL PRODUCTION OVER 5 YEARS

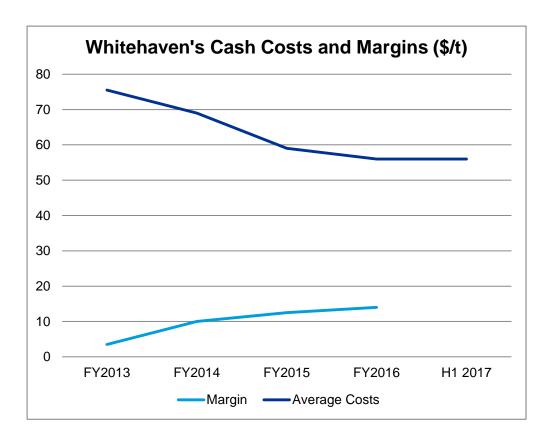


- Managed sales and saleable production have increased by a factor of 4 times over four years and reached 20Mt in FY2016
- Equity sales and saleable coal production were 15.3Mt and 15.1Mt respectively
- Guidance for saleable coal production in FY2017 is in the range of 21Mt to 22Mt



## **Cash Costs and Margins**

#### WHITEHAVEN HAS SUCCESSFULLY REDUCED COSTS IN EACH OF THE PAST FOUR YEARS



- Cash costs have been driven into the first quartile
- Cost guidance for the first half of FY2017
   was \$56/t excluding royalties
- Margins have increased progressively,
   more than offsetting declining coal prices
- Whitehaven's received average coal prices in the first half were US\$78/t
   (A\$103/t) for thermal coal and US\$90/t
   (A\$119/t) for met coal
- Margins for the first half of FY2017 will be significantly higher when compared to previous periods



## **Tier 1 Mines – Maules Creek and Narrabri**

1<sup>ST</sup> QUARTILE MINES PRODUCING HIGH QUALITY COAL

#### **Maules Creek**

- Ownership: 75% Whitehaven
- Open cut mine using ultra-class mining equipment
- Reserves of 510Mt providing a ~ 40 year mine life
- FY2017 production expected to be in the range of 9.5Mt and
   9.8Mt ROM coal
- Growing source of high quality SSCC production

#### **Narrabri**

- Ownership: 70% Whitehaven
- Underground longwall coal mine
- Reserves of 216Mt providing ~ 25 year mine life
- Production in FY2017 is expected to be in the range of 7.5Mt
   to 7.8Mt ROM coal after revised guidance in January 2017

**Note:** See slide 2 for the Competent Person Statement and slides 23 and 24 for the full Coal Resources and Reserves JORC tables.

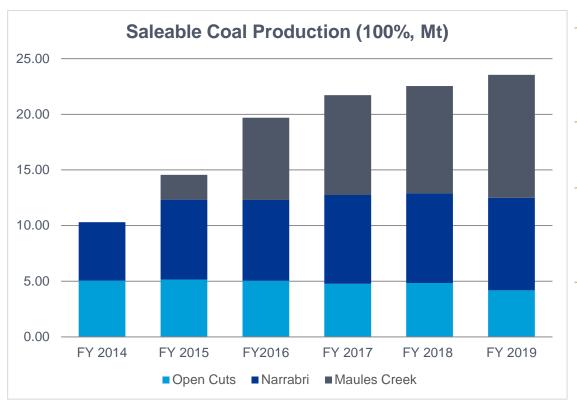






## Whitehaven's Growth to Continue

#### MAULES CREEK RAMP UP AND WIDER FACE AT NARRABRI CONTRIBUTING TO GROWTH



- Ramping up of production from Maules Creek continues, and the wider face at Narrabri contributes from H2 FY2017
- Increased production of higher quality coal improves margins
- Saleable coal production for FY2017 is expected to be in the range of 21Mt to 22Mt (100% basis)
- The Vickery project offers a further growth option beyond Maules Creek

Note: Graph depicts saleable coal on a 100% basis including pre-commercial and commercial coal production from Maules Creek . The production profile shown in the chart is fully underpinned by the Company's Marketable Reserves from its operating mines. See slides 23 and 24 for full details of the Coal Resources and Reserves JORC tables and Slide 2 for the Competent Persons Statement. Go to the Whitehaven website for the complete Joint Ore Reserves Committee (JORC) Table 1 disclosures for each mine included in the production profile

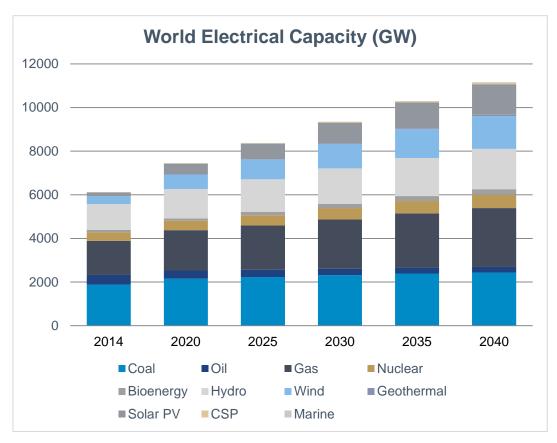


# World & Asian Coal Demand Growth



## **World Electrical Capacity**

IEA WORLD ENERGY OUTLOOK 2016 FORECASTS GROWING COAL GENERATING CAPACITY GROWTH



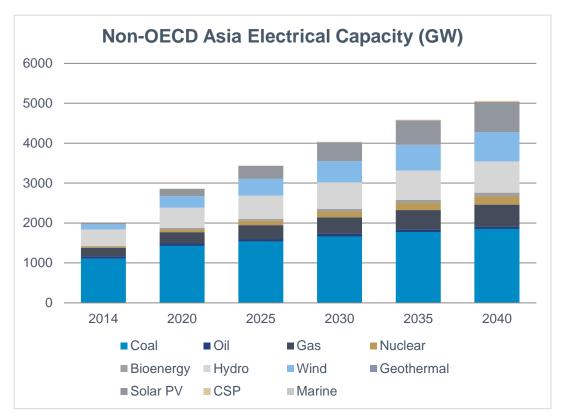
Source: IEA World Energy Outlook 2016, New Policies Scenario

- Under the New Policies Scenario the IEA expects world electricity demand to grow at 2% annually to 2040 increasing by 66% over the period
- Coal-fired power's grows by 555GW in absolute terms
- Under the New Policies Scenario subsidies paid for renewable based power were US\$120 billion in 2015. This will grow to US\$210 billion in 2030 before declining to US\$170 billion in 2040
- Can countries and individuals carry this cost burden?



## **Asian Electrical Capacity**

#### THE REGION OFFERING THE STRONGEST DEMAND GROWTH FOR COAL



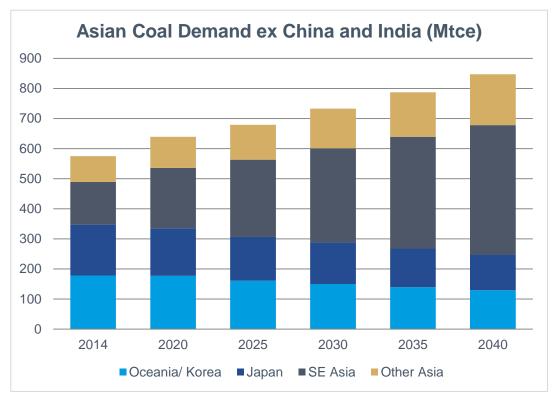
Source: IEA World Energy Outlook 2016, New Policies Scenario. Countries in Non-OECD Asia include Bangladesh, Brunei Darussalam, Cambodia, China, India, Indonesia, DRP Korea, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Thailand, Vietnam and other Asian countries

- Total generating capacity grows from 2000GW in 2014 to over 5000GW in 2040 according to the IEA
- Coal's share of the generating capacity declines from 55% to 37% but grows by 67% in absolute terms
- Coal fired generating capacity in the region grows from 1106GW in 2014 to 1849GW in 2040
- This additional generating capacity will require 1.8Btpa extra thermal coal by 2040



## Australia's & Whitehaven's Markets

COAL DEMAND IN ASIA EX CHINA AND INDIA SET TO GROW STRONGLY



- Growth in coal consumption is concentrated in Asia countries driven by strong growth in incomes and energy needs
- Coal demand in SE Asia is set to triple from 142Mtce (165Mt 6,000k/cal coal) in 2014 to 430Mtce (499Mt 6,000k/cal coal) in 2040)
- Why power generation from coal requires less infrastructure than gas, is technically less sophisticated than nuclear or variable renewables and has a shorter construction time and lower capex than large hydro plants

Source: IEA World Energy Outlook 2016, New Policies Scenario

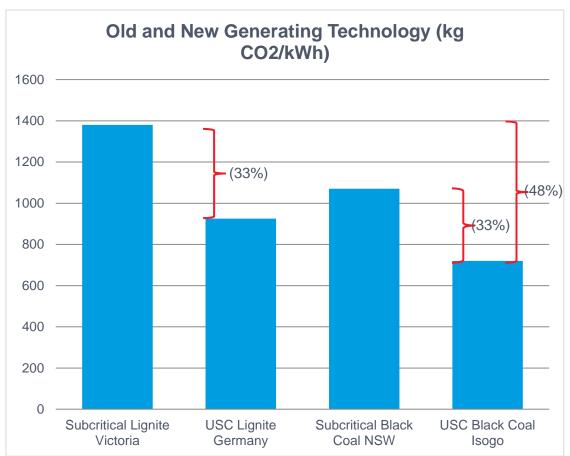
Note: 1 tonne of coal equivalent is equal to 1.27t of 5500k/cal coal



## **Coal - Pathway to Lower Carbon Emissions**

UTILISING HIGH QUALITY COALS IN MORE EFFICIENT HELE POWER STATIONS LOWERS EMISSIONS

- If the world converted from lignite and black coal fired subcritical power stations to black coal fired USC plants then CO2 emissions would fall significantly
- Raising the global efficiency of coal plants from the current level of 33% to 42% by deploying HELE technology would reduce annual CO2 emissions by more than 2 billion tonnes

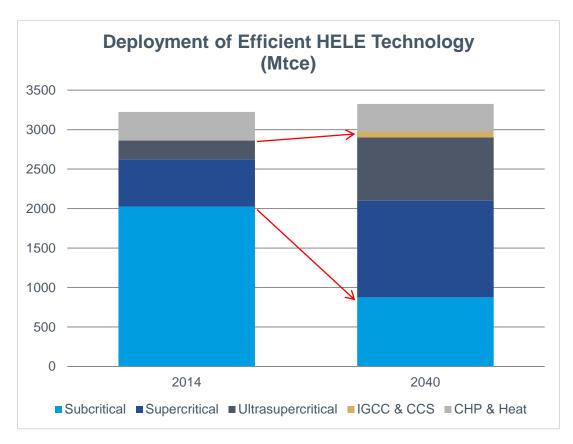


Source: WCA, IEA Technology Road Map HELE Generation 2012 and IEA Clean Coal Centre



## **Deployment of HELE Gathers Momentum**

OVER THE NEXT 25 YEARS A TOTAL OF 730GW OF HELE PLANTS WILL BE BUILT



- Global coal demand for electricity generation increases by 463Mtce from 2014 to 2040, predominantly in the Asian region
- In 2014 around 70% of the generating fleet used subcritical technology
- By 2040 about 65% of the fleet will use HELE technology
- Many of these power stations are being deployed in Asia

Source: IEA World Energy Outlook 2016, New Policies Scenario



# How Whitehaven Benefits



## Whitehaven's Growing Customer Base

#### OVER 90% OF WHITEHAVEN'S COAL IS CONSUMED IN PREMIUM ASIAN MARKETS

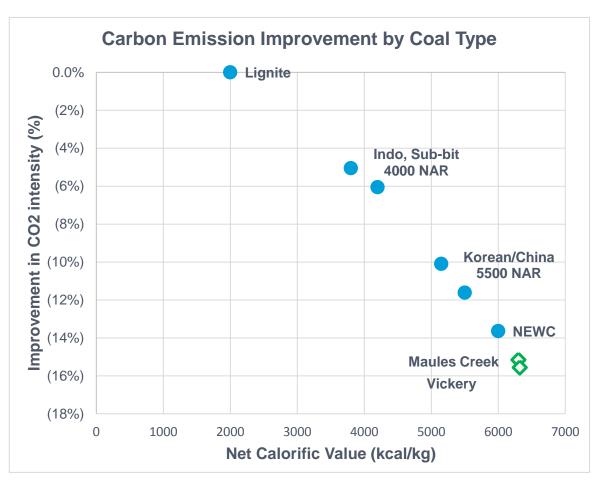
- Whitehaven sells all of its thermal and metallurgical coal production into the seaborne market
- Whitehaven has become an important supplier in the seaborne coal trade, a critical part of the supply chain supporting the steel, general manufacturing and power generation industries across Asia
- A large and growing number of customers are dependent upon high quality coal supplied by Whitehaven
- In Japan, coal supplied by Whitehaven provides power for about 40 minutes each and every day





## Whitehaven's High CV Coals

USE OF MAULES CREEK COAL IN POWER GENERATION REDUCES CARBON EMISSIONS



- Using higher quality coals in USC (HELE) power stations lowers carbon emissions
- More energy output from each tonne of coal consumed – higher
   CV and increased efficiency
- With more of these power stations being deployed, Whitehaven is well placed to supply its high quality coals

Source: Whitehaven, Wood Mackenzie and Australian Coal Review World Database

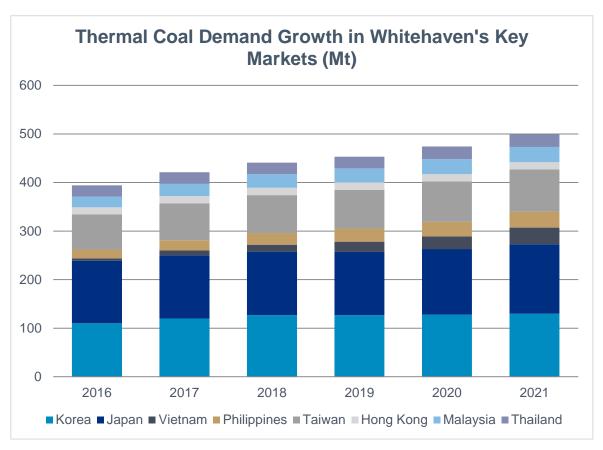


## Outlook



## **Near Term Seaborne Coal Demand Growth**

#### WHITEHAVEN EXPECTS COAL DEMAND TO GROW OVER NEXT FIVE YEARS



- Coal consumption is set to grow in all of Whitehaven's current markets and in target SE Asian markets
- All of Whitehaven's current customers are adding new coal generation capacity
- Over 100Mtpy additional coal required in the region by 2021

Source: Whitehaven supply demand analysis. Data excludes China and India as both countries are not target markets for Whitehaven thermal coal







# Appendices



## Resources

WHITEHAVEN COAL LIMITED - COAL RESOURCES - AUGUST 2016								
Tenement		Measured Resource	Indicated Resource	Inferred Resource	Total Resources	Competent Person	Report Date	
Vickery Opencut	CL316/EL4699 EL5831/EL7407	230	165	110	505	1	Jun-15	
Vickery Underground	EL8224/ML1464 ML1471	-	95	135	230	1	Jun-15	
Rocglen Opencut	ML1620	6	4	-	10	2	Mar-16	
Rocglen Underground	ML1620	-	3	1	4	2	Mar-15	
Tarrawonga Opencut*	EL5967/ML1579 ML1685/ML1693	45	18	13	76	2	Mar-16	
Tarrawonga Underground	EL5967/ML1579 ML1685/ML1693	10	15	14	39	2	Apr-14	
Maules Creek Opencut**	CL375/AUTH346/ EL8072	230	360	70	660	6	Mar-16	
Werris Creek Opencut	ML1563/ML1672	15	3	-	18	2	Mar-16	
Narrabri Underground***	ML1609/EL6243	190	300	230	720	5	Mar-16	
Gunnedah Opencut	ML1624/EL5183/ CCL701	7	47	89	143	2	Aug-14	
Gunnedah Underground	ML1624/EL5183/ CCL701	2	138	24	164	2	Aug-14	
Bonshaw Opencut	EL6450/EL6587	-	4	7	11	2	Aug-14	
Ferndale Opencut	EL7430	103	135	134	372	3	Jan-13	
Ferndale Underground	EL7430	-	-	73	73	3	Jan-13	
Oaklands North Opencut	EL6861	110	260	580	950	2	Aug-14	
Pearl Creek Opencut****	EPC862	-	14	38	52	4	Jan-13	
TOTAL COAL RESOURCES		948	1563	1518	4029			

<sup>1.</sup> John Rogis, 2. Ben Thompson, 3. Greg Jones, 4. Phil Sides, 5. Rick Walker, 6. Shaun Tamplin

Note: See Competent Person Statement on Slide 2



<sup>\*</sup> Whitehaven owns 70% share of opencut resources within ML1579, ML1685 and ML1693. The total combined resource for Tarrawonga Mining Leases (ML1579, 1685 and 1693) and Exploration Licence (EL5967) is reported.

<sup>\*\*</sup> Maules Creek Joint Venture - Whitehaven owns 75% share.

<sup>\*\*\*</sup> Narrabri Joint Venture - Whitehaven owns 70% share.

<sup>\*\*\*\*</sup> Dingo Joint Venture - Whitehaven owns 70% share.

<sup>#</sup> The Coal Resources for active mining areas are current to the pit surface as at the report date.

#### Reserves

WHITEHAVEN COAL LIMITED - COAL RESERVES - AUGUST 2016									
Tenement		Recoverable Reserves			Marketable Reserves			Competent	Report
		Proved	Probable Total	Proved	Probable	Total	Person	Date	
Vickery Opencut	CL316/EL4699/EL7407	-	200	200	_	178	178	1	Mar-15
Rocglen Opencut	ML1620	2.8	0.6	3.4	2.1	0.5	2.6	1	Mar-16
Tarrawonga Opencut *	EL5967 / ML1579 ML1685 / ML1693	29	10	39	27	9	35	1	Mar-16
Maules Creek Opencut**	CL375/AUTH346	210	300	510	190	270	460	3	Mar-16
Werris Creek Opencut	ML 1563/ML 1672	12	2	14	12	2	14	1	Mar-16
Narrabri North Underground***	ML1609	80	42	122	78	40	118	4	Mar-16
Narrabri South Underground***	EL6243	_	94	94	_	75	75	2	Mar-15
TOTAL COAL RESERVES		334	649	982	309	575	883		

<sup>1.</sup> Doug Sillar, 2. Graeme Rigg, 3. James Smith, 4. Michael Barker

Note: See Competent Person Statement on Slide 2



<sup>\*</sup> Whitehaven owns 70% share of opencut reserves within ML1579, ML1685 and ML1693. The total combined reserve for Tarrawonga Mining Leases (ML1579, 1685 and 1693) and Exploration Licence (EL5967) is reported.

<sup>\*\*</sup> Maules Creek Joint Venture - Whitehaven owns 75% share.

<sup>\*\*\*</sup> Narrabri Joint Venture - Whitehaven owns 70% share.

<sup>#</sup> The Coal Reserves for active mining areas are current as at report date.

<sup>##</sup> Coal Reserves are quoted as a subset of Coal Resources.

<sup>###</sup> Marketable Reserves are based on geological modeling of the anticipated yield from Recoverable Reserves