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BHP OPERATIONAL REVIEW FOR THE HALF YEAR ENDED 31 DECEMBER 2018

- Production guidance for the 2019 financial year remains unchanged for petroleum, iron ore, metallurgical coal and energy coal. Total copper production guidance increased to between 1,645 and 1,740 kt and reflects the retention of Cerro Colorado.
- Group copper equivalent production⁽¹⁾ was broadly unchanged in the December 2018 half year, with volumes for the full year also expected to be in line with last year.
- Full year unit costs for all major assets are expected to be in line with guidance⁽²⁾, predominantly reflecting stronger anticipated volumes in the second half of the year. However, unit costs were tracking above full year guidance at the December 2018 half year as a result of planned maintenance and production outages during the period.
- All major projects under development are tracking to plan.
- In Petroleum, the first appraisal well at Trion in Mexico (Trion-2DEL) encountered oil, in line with expectations. A downdip sidetrack is currently being drilled to further appraise the field.
- The Onshore US sale process was completed on 31 October 2018, with the net proceeds of US\$10.4 billion to be returned to shareholders. On 17 December 2018, a US\$5.2 billion off-market buy-back of BHP Group Limited shares was successfully completed. The balance of the net proceeds will be paid on 30 January 2019 as a special dividend of US\$1.02 per share.
- The financial results for the December 2018 half year are expected to reflect certain items as summarised in the table on page two.
- Productivity for the December 2018 half year has been impacted by unplanned production outages at Olympic Dam, Spence and Western Australia Iron Ore, with a total negative impact of approximately US\$600 million.

Production	Dec H18 (vs Dec H17)	Dec Q18 (vs Sep Q18)	Dec Q18 commentary
Petroleum (MMboe)	63 (-1%)	30 (-8%)	Lower seasonal gas sales at Bass Strait partially offset by Pyrenees resuming production following maintenance in the previous quarter.
Copper (kt)	825 (-1%)	416 (+2%)	Record throughput at Cerro Colorado and higher volumes at Spence as production returned to full capacity following a fire in September 2018, partially offset by lower volumes at Escondida as a result of expected lower copper grades.
Iron ore (Mt)	119 (+2%)	58 (-6%)	Volumes at Western Australia Iron Ore (WAIO) impacted by a train derailment on 5 November 2018.
Metallurgical coal (Mt)	21 (+2%)	10 (-1%)	Record production at South Walker Creek offset by the impact of the scheduled longwall move at Broadmeadow.
Energy coal (Mt)	13 (-5%)	7 (0%)	Increased production at New South Wales Energy Coal (NSWEC) as a result of higher bypass coal offset by the impact of mine sequence changes at Cerrejón.

BHP Chief Executive Officer, Andrew Mackenzie, said: "Production in the first half was broadly in line with the prior period despite planned maintenance and outages. In Petroleum, our first appraisal well at Trion in Mexico encountered oil and we added to our exploration options with successful bids for two licences offshore Eastern Canada. We completed the sale of our US shale assets and returned US\$5.2 billion to shareholders through a share buy-back program, with a further US\$5.2 billion to be returned as a special dividend on 30 January 2019."

Summary

Operational performance

Production for the December 2018 half year and guidance for the 2019 financial year are summarised below.

Production	Dec H18	Dec Q18	Dec H18 vs Dec H17	Dec Q18 vs Dec Q17	Dec Q18 vs Sep Q18	Previous FY19 guidance	Current FY19 guidance	
Petroleum – Conventional (MMboe)	63	30	(1%)	(2%)	(8%)	113 - 118	113 - 118	Upper end of range
Copper (kt)	825	416	(1%)	(3%)	2%	1,620 - 1,705	1,645 - 1,740	Increased
Escondida (kt)	580	285	0%	(10%)	(4%)	1,120 - 1,180	1,120 - 1,180	Unchanged
Other copper ⁽ⁱ⁾ (kt)	245	132	(2%)	15%	16%	500 - 525	525 - 560	Cerro Colorado 60 - 70 kt for FY19
Iron ore ⁽ⁱⁱ⁾ (Mt)	119	58	2%	(6%)	(6%)	241 - 250	241 - 250	Unchanged
WAO (100% basis) (Mt)	135	66	(1%)	(9%)	(6%)	273 - 283	273 - 283	Unchanged
Metallurgical coal (Mt)	21	10	2%	6%	(1%)	43 - 46	43 - 46	Unchanged
Energy coal (Mt)	13	7	(5%)	(9%)	0%	28 - 29	28 - 29	Unchanged

- (i) Other copper comprises Pampa Norte (including Cerro Colorado production for the full 2019 financial year to reflect its retention, previous guidance only included 35 kt of production for the first half of the 2019 financial year), Olympic Dam and Antamina.
- (ii) Increase in BHP's share of volumes reflects the expiry of the Wheelarra Joint Venture sublease in March 2018, with control of the sublease area reverted to the Jimblebar Joint Venture, which is accounted for on a consolidated basis with minority interest adjustments.

Summary of disclosures

BHP expects its financial results for the first half of the 2019 financial year to reflect certain items as summarised in the table below. The table does not provide a comprehensive list of all items impacting the period. The financial statements are the subject of ongoing work that will not be finalised until the release of the financial results on 19 February 2019. Accordingly, the information is subject to update.

Description	H1 FY19 impact US\$M ⁽ⁱ⁾	Classification ⁽ⁱⁱ⁾
Continuing operations		
Change in the accounting classification of treatment and refining charges as a result of IFRS15 ⁽³⁾ (reclassification between revenue and operating costs)	~260	↓ Revenue ↓ Operating costs
Unit costs tracking above full year guidance ⁽²⁾ in H1 FY19 as a result of planned maintenance and production outages	Refer footnote ⁽ⁱⁱⁱ⁾	↑ Operating costs
Exploration expense (including petroleum and minerals exploration programs)	222	↑ Exploration expense
Impairment charges related to the Whenan shaft refurbishment project at Olympic Dam (changes to the mine access plan) and Cerro Colorado (termination of the sale and purchase agreement)	100-150	↑ Depreciation, amortisation and impairments
The Group's adjusted effective tax rate for H1 FY19 is expected to be slightly above the full year guidance range of 30 to 35 per cent	Refer footnote ⁽ⁱⁱⁱ⁾	↑ Taxation expense
Non-cash fair value adjustments related to interest rate and exchange rate movements are expected to increase net debt in H1 FY19	Refer footnote ⁽ⁱⁱⁱ⁾	↑ Net debt
Higher Australian and Chilean income tax payments in H1 FY19 compared with H1 FY18 primarily due to higher instalment rates and settlement of an Australian transfer pricing dispute	~700	↓ Operating cash inflow
Dividends paid to non-controlling interests	~620	↑ Financing cash outflow
Reversal of provisions for global taxation matters which were resolved during the period	~240	Exceptional item credit
Financial impact on BHP Billiton Brasil of the Samarco Dam failure	Refer footnote ⁽ⁱⁱⁱ⁾	Exceptional item charge
Discontinued operations		
Loss from Onshore US (after taxation) mainly due to incremental costs (including redundancy costs and retention payments to employees) and State and Federal tax expenses	275-325	↓ Profit after taxation
Net proceeds received from the sale of Onshore US (comprising Fayetteville US\$0.3 billion and Eagle Ford, Haynesville and Permian US\$6.7 billion, representing one-half of the gross consideration at completion less customary completion adjustments and two instalment payments)	7,028	↑ Investing cash inflow

- (i) Numbers are not tax effected, unless otherwise noted.
- (ii) There will be a corresponding balance sheet, cash flow and/or income statement impact as relevant.
- (iii) Financial impact is the subject of ongoing work and is not yet finalised.

Productivity for the December 2018 half year has been impacted by lower than expected volumes at Olympic Dam (unplanned acid plant outage in August 2018, volume impact of 45 kt), Spence (fire at the electro-winning plant in September 2018, volume impact of 25 kt) and WAIO (train derailment in November 2018, volume impact of 4 Mt), with a total negative impact of approximately US\$600 million. Productivity guidance for the full year is currently under review and revised guidance will be provided in the December 2018 half year financial results.

Average realised prices

The average realised prices achieved for our major commodities are summarised below.

Average realised prices ⁽ⁱ⁾	Dec H18	Dec H17	Jun H18	FY18	Dec H18 vs Dec H17	Dec H18 vs Jun H18	Dec H18 vs FY18
Oil (crude and condensate) (US\$/bbl)	69.41	53.76	67.07	60.12	29%	3%	15%
Natural gas (US\$/Mscf) ⁽ⁱⁱ⁾	3.98	3.54	3.71	3.62	12%	7%	10%
US natural gas (US\$/Mscf)	2.88	2.84	2.77	2.80	1%	4%	3%
LNG (US\$/Mscf)	10.19	7.48	8.65	8.07	36%	18%	26%
Copper (US\$/lb) ^(iv)	2.54	3.08	2.93	3.00	(18%)	(13%)	(15%)
Iron ore (US\$/wmt, FOB)	55.62	56.54	56.86	56.71	(2%)	(2%)	(2%)
Metallurgical coal (US\$/t)	179.82	164.22	189.66	177.22	9%	(5%)	1%
Hard coking coal (US\$/t) ⁽ⁱⁱⁱ⁾	197.86	182.29	205.80	194.59	9%	(4%)	2%
Weak coking coal (US\$/t) ⁽ⁱⁱⁱ⁾	134.12	120.99	143.40	131.70	11%	(6%)	2%
Thermal coal (US\$/t) ^(iv)	84.15	87.49	86.47	86.94	(4%)	(3%)	(3%)
Nickel metal (US\$/t)	12,480	11,083	13,974	12,591	13%	(11%)	(1%)

(i) Based on provisional, unaudited estimates. Prices exclude sales from equity accounted investments, third party product and internal sales, and represent the weighted average of various sales terms (for example: FOB, CIF and CFR), unless otherwise noted. Includes the impact of provisional pricing and finalisation adjustments.

(ii) Includes internal sales.

(iii) Hard coking coal (HCC) refers generally to those metallurgical coals with a Coke Strength after Reaction (CSR) of 35 and above, which includes coals across the spectrum from Premium Coking to Semi Hard Coking coals, while weak coking coal (WCC) refers generally to those metallurgical coals with a CSR below 35.

(iv) Export sales only; excludes Cerrejón. Includes thermal coal sales from metallurgical coal mines.

(v) Comparative financial information has been restated for the new accounting standard, IFRS15 Revenue from Contracts with Customers, which became effective from 1 July 2018.

The majority of iron ore shipments were linked to the index price for the month of shipment, with price differentials predominantly a reflection of product quality and market fundamentals. The majority of metallurgical coal and energy coal exports were linked to the index price for the month of shipment or sold on the spot market at fixed or index-linked prices, with price differentials reflecting product quality.

At 31 December 2018, the Group had 339 kt of outstanding copper sales that were revalued at a weighted average price of US\$2.70 per pound. The final price of these sales will be determined over the remainder of the 2019 financial year. In addition, 364 kt of copper sales from the 2018 financial year were subject to a finalisation adjustment in the current period. The provisional pricing and finalisation adjustments will decrease Underlying EBITDA⁽⁴⁾ by US\$272 million in the 2019 financial year and is included in the average realised copper price in the above table.

Major development projects

During the December 2018 quarter, the North West Shelf Greater Western Flank-B project achieved first production ahead of schedule and under budget. The North West Shelf Greater Western Flank-B project will not be reported in future Operational Reviews.

At the end of December 2018, BHP had five major projects under development in petroleum, copper, iron ore and potash, with a combined budget of US\$10.6 billion over the life of the projects.

Corporate update

The Onshore US sales process was completed on 31 October 2018, with the net proceeds of US\$10.4 billion to be returned to shareholders through an off-market buy-back and a special dividend shareholder return program. On 17 December 2018, the US\$5.2 billion off-market buy-back of BHP Group Limited shares was successfully completed and enabled the buy-back of approximately 265.8 million shares (5.0 per cent of the total issued capital of BHP Group Limited and BHP Group Plc) at A\$27.64 per share. In addition, the Board of BHP determined to pay a special dividend to shareholders of US\$1.02 per share, representing the residual US\$5.2 billion of net proceeds, based on the reduced number of shares on issue (approximately 5,058 million) following completion of the off-market buy-back.

On 19 November 2018, BHP settled its transfer pricing dispute relating to its marketing operations in Singapore with the Australian Taxation Office. The settlement fully resolved all prior years, being 2003 to 2018, with no admission of tax avoidance by BHP. As part of the settlement, BHP paid a total of approximately A\$529 million in additional taxes for the prior years (BHP paid A\$328 million of this amount when the amended assessments were received in prior years, with the balance of A\$201 million paid in the December 2018 quarter). In addition, the settlement provides certainty in relation to the future taxation treatment as, due to a change in ownership of the main marketing entity, all profits made in Singapore in relation to the Australian assets owned by BHP Group Limited will be fully subject to Australian tax under the Controlled Foreign Company tax rules from the 2020 financial year.

BHP has agreed to fund a total of US\$515 million in further financial support for the Renova Foundation and Samarco. This comprises US\$438 million to fund the Renova Foundation until 31 December 2019 which will be offset against the Group's provision for the Samarco dam failure, and a short-term facility of up to US\$77 million to be made available to Samarco until 30 June 2019.

As at the date of this Operational Review, we are not in a position to provide an update, for the purpose of the December 2018 half year financial results, on the ongoing potential financial impacts on BHP Billiton Brasil of the Samarco dam failure. Any financial impacts will continue to be treated as an exceptional item.

Petroleum

Production

	Dec H18	Dec Q18	Dec H18 vs Dec H17	Dec Q18 vs Dec Q17	Dec Q18 vs Sep Q18
Crude oil, condensate and natural gas liquids (MMboe)	29	14	(5%)	(3%)	3%
Natural gas (bcf)	206	94	1%	(2%)	(16%)
Total petroleum production (MMboe)	63	30	(1%)	(2%)	(8%)

Petroleum - Total Conventional petroleum production was broadly flat at 63 MMboe. Guidance for the 2019 financial year remains unchanged at between 113 and 118 MMboe, with volumes expected to be towards the upper end of the guidance range.

Crude oil, condensate and natural gas liquids production declined by five per cent to 29 MMboe due to natural field decline across the portfolio and a 70 day planned dry dock maintenance program at Pyrenees completed during the September 2018 quarter. This decline was partially offset by higher uptimes at our Gulf of Mexico assets.

Natural gas production was broadly flat at 206 bcf, reflecting increased tax barrels at Trinidad and Tobago in accordance with the terms of our Production Sharing Contract. This was partially offset by planned maintenance at Trinidad and Tobago in the December 2018 quarter and natural field decline across the portfolio.

On 30 November 2018, BHP completed the sale of its interests in the Bruce and Keith oil and gas fields in the United Kingdom to Serica Energy UK Ltd, with an effective date of 1 January 2018.

Projects

Project and ownership	Capital expenditure US\$M	Initial production target date	Capacity	Progress
North West Shelf Greater Western Flank-B (Australia) 16.67% (non-operator)	216	CY19	To maintain LNG plant throughput from the North West Shelf operations.	First production achieved in October 2018, ahead of schedule and below budget. The overall project is 98% complete.
Mad Dog Phase 2 (US Gulf of Mexico) 23.9% (non-operator)	2,154	CY22	New floating production facility with the capacity to produce up to 140,000 gross barrels of crude oil per day.	On schedule and budget. The overall project is 37% complete.

During the December 2018 quarter, the Bass Strait West Barracouta project was approved. The A\$200 million (BHP share) investment is expected to produce first gas in the 2021 calendar year to help offset Bass Strait production decline, and to deliver competitive returns.

On 8 January 2019, BP (the operator) announced the sanction of the Atlantis Phase 3 project. Approval from BHP's Board will be sought during the March 2019 quarter. Study work continues on the Ruby project in Trinidad and Tobago.

Petroleum exploration

Exploration and appraisal wells drilled during the December 2018 quarter are summarised below.

Well	Location	Target	Formation age	BHP equity	Spud date	Water depth	Total well depth	Status
Samurai-2 ST01 (sidetrack)	US Gulf of Mexico GC476	Oil	Miocene	50% (Murphy Operator)	25 August 2018	1,088 m	10,088 m	Plugged and abandoned
Concepcion-1	Trinidad & Tobago Block TTDA 5	Gas	Pleistocene/Pliocene	65% (BHP Operator)	30 September 2018	1,721 m	3,506 m	No commercial hydrocarbons encountered; plugged and abandoned
Trion-2DEL	Mexico Block AE-0093	Oil	Eocene	60% (BHP Operator)	15 November 2018	2,379 m	4,659 m	Hydrocarbons encountered

In the US Gulf of Mexico, a sidetrack of the Samurai-2 exploration well commenced on 25 August 2018 to further appraise the discovery, and was plugged and abandoned on 2 November 2018 after delineating the Samurai discovery. Appraisal and development planning is in progress. In the Western US Gulf of Mexico, the Ocean Bottom Node⁽⁵⁾ seismic acquisition is expected to be completed in the March 2019 quarter. This is the world's first deepwater exploration ocean bottom node seismic acquisition.

In Trinidad and Tobago, the Concepcion-1 well was spud on 30 September 2018 to further test the Magellan play, with no commercial hydrocarbons encountered. The well was plugged and abandoned on 25 October 2018. This completed Phase 2 of our deepwater exploration drilling campaign in Trinidad and Tobago.

In Mexico, we spud the Trion-2DEL appraisal well on 15 November 2018 and encountered oil in line with expectations. This was the first well drilled by an international operator in the Mexican deepwater. A downdip sidetrack of the Trion-2DEL well commenced on 4 January 2019 to further appraise the field, including the oil water contact.

BHP was successful in its bids to acquire a 100 per cent interest in, and operatorship of, two exploration licences for blocks 8 and 12 in the Orphan Basin, offshore Eastern Canada. BHP's aggregate bid amount of US\$625 million reflects the costs of the drilling and seismic work likely to be performed during the exploration phase, although there is no minimum work program under the licence agreements. BHP's minimum commitment under the licence agreements, if no work is performed, is approximately US\$119 million for block 8 and US\$38 million for block 12.

Petroleum exploration expenditure for the December 2018 half year was US\$316 million, of which US\$166 million was expensed. A US\$750 million exploration and appraisal program is being executed for the 2019 financial year.

Onshore US – Discontinued operations

The Onshore US sales process was completed on 31 October 2018, with the rights to the economic profits transferring to the purchasers from 1 July 2018. Onshore US production for the July 2018 to October 2018 period was 26 MMboe, with drilling and development expenditure of US\$0.4 billion. Our operated rig count remained unchanged at five, with two rigs at Eagle Ford, two rigs at Permian and one at Haynesville. We continue to provide certain transitional services to BP for up to nine months following completion, however no further production will be reported by BHP.

Copper

Production

	Dec H18	Dec Q18	Dec H18 vs Dec H17	Dec Q18 vs Dec Q17	Dec Q18 vs Sep Q18
Copper (kt)	825	416	(1%)	(3%)	2%
Zinc (t)	54,795	24,237	(6%)	(17%)	(21%)
Uranium oxide concentrate (t)	1,495	936	33%	285%	67%

Copper – Total copper production decreased by one per cent to 825 kt. Guidance for the 2019 financial year has been increased to between 1,645 and 1,740 kt and reflects the retention of Cerro Colorado.

Escondida copper production was broadly unchanged at 580 kt as higher concentrator throughput and improved recoveries offset the impact of expected lower copper grades. Production guidance remains unchanged at between 1,120 and 1,180 kt for the 2019 financial year.

Pampa Norte copper production decreased by 17 per cent to 105 kt and reflects planned maintenance and a production outage at Spence following a fire at the electro-winning plant in September 2018. Record ore milled was achieved in the half year at both Spence and Cerro Colorado. Spence returned to full capacity during the December 2018 quarter, with production guidance of between 160 and 175 kt unchanged for the 2019 financial year. In the December 2018 quarter, BHP and EMR Capital agreed to terminate their agreement for the sale and purchase of Cerro Colorado after it became clear that the financing conditions of the transaction would not be satisfied by the end of the 2018 calendar year. Production at Cerro Colorado for the 2019 financial year is expected to be between 60 and 70 kt.

Olympic Dam copper production increased by 20 per cent to 65 kt as a result of the major smelter maintenance campaign in the prior period, which was partially offset by an unplanned acid plant outage in August 2018. Surface operations resumed at the end of October 2018 following completion of acid plant remediation works. Underground operations continue to progress into the Southern Mine Area, with record development kilometres achieved and the mine's third decline becoming fully operational in the quarter. Production guidance for the 2019 financial year remains unchanged at between 170 and 180 kt.

Antamina copper production increased by eight per cent to 75 kt due to higher head grades. Production guidance for the 2019 financial year remains unchanged at approximately 135 kt for copper and approximately 85 kt for zinc.

Projects

Project and ownership	Capital expenditure US\$M	Initial production target date	Capacity	Progress
Spence Growth Option (Chile) 100%	2,460	FY21	New 95 ktpd concentrator is expected to increase Spence's payable copper in concentrate production by approximately 185 ktpa in the first 10 years of operation and extend the mining operations by more than 50 years.	On schedule and budget. The overall project is 34% complete.

Iron Ore

Production

	Dec H18	Dec Q18	Dec H18 vs Dec H17	Dec Q18 vs Dec Q17	Dec Q18 vs Sep Q18
Iron ore (kt)	119,226	57,835	2%	(6%)	(6%)

Iron ore – Total iron ore production increased by two per cent to 119 Mt (135 Mt on a 100 per cent basis). Guidance for the 2019 financial year remains unchanged at between 241 and 250 Mt, or between 273 and 283 Mt on a 100 per cent basis.

At WAIO, increased volumes reflected record production at Jimblebar and the impact from the Mt Whaleback fire in the prior period. This was partially offset by the impact of planned maintenance in the September 2018 quarter and a train derailment on 5 November 2018 which resulted in the suspension of rail operations for five days and a production impact of approximately 4 Mt. During the rail outage, mine stockpile levels were built and are expected to be partially drawn down in the March 2019 quarter.

Mining and processing operations at Samarco remain suspended following the failure of the Fundão tailings dam and Santarém water dam on 5 November 2015.

Projects

Project and ownership	Capital expenditure US\$M	Initial production target date	Capacity	Progress
South Flank (Australia) 85%	3,061	CY21	Sustaining iron ore mine to replace production from the 80 Mtpa (100 per cent basis) Yandi mine.	On schedule and budget. The overall project is 21% complete.

Coal

Production

	Dec H18	Dec Q18	Dec H18 vs Dec H17	Dec Q18 vs Dec Q17	Dec Q18 vs Sep Q18
Metallurgical coal (kt)	20,630	10,272	2%	6%	(1%)
Energy coal (kt)	13,307	6,667	(5%)	(9%)	0%

Metallurgical coal – Metallurgical coal production increased by two per cent to 21 Mt. Guidance for the 2019 financial year remains unchanged at between 43 and 46 Mt, with volumes weighted to the second half of the year as expected.

At Queensland Coal, increased production was supported by record production at South Walker Creek and higher wash-plant throughput at Poitrel following the purchase of the Red Mountain processing facility. This increase was partially offset by the scheduled longwall move at Broadmeadow which was successfully completed during the quarter.

The Caval Ridge Southern Circuit project was completed according to plan with the conveying of first coal in October 2018.

Energy coal – Energy coal production decreased by five per cent to 13 Mt. Guidance for the 2019 financial year remains unchanged at approximately 28 to 29 Mt.

New South Wales Energy Coal production decreased by four per cent as a result of a higher average strip ratio. Cerrejón production decreased by seven per cent due to mine sequence changes.

Other

Nickel production

	Dec H18	Dec Q18	Dec H18 vs Dec H17	Dec Q18 vs Dec Q17	Dec Q18 vs Sep Q18
Nickel (kt)	39.5	18.1	(15%)	(22%)	(15%)

Nickel – Nickel West production decreased by 15 per cent to 40 kt as operations were suspended following a fire at the Kalgoorlie smelter in September 2018. The smelter returned to operation on 1 October 2018, with full repairs now expected to be completed in the March 2019 quarter. Planned maintenance at the Kwinana refinery was brought forward to align with the smelter outage and, as a result, production guidance for the 2019 financial year remains unchanged and is expected to be broadly in line with the 2018 financial year.

Potash project

Project and ownership	Investment US\$M	Scope	Progress
Jansen Potash (Canada) 100%	2,700	Investment to finish the excavation and lining of the production and service shafts, and to continue the installation of essential surface infrastructure and utilities.	The project is 82% complete and within the approved budget. The main activity for the quarter focussed on removing the boring equipment from both shafts.

Minerals exploration

Minerals exploration expenditure for the December 2018 half year was US\$81 million, of which US\$56 million was expensed. Greenfield minerals exploration is predominantly focused on advancing copper targets within Chile, Ecuador, Peru, Canada, South Australia and the South-West United States.

Consistent with our exploration focus on copper, in September 2018, BHP acquired an initial 6.1 per cent interest in SolGold Plc (SolGold), the majority owner and operator of the Cascabel porphyry copper-gold project in Ecuador. On 15 October 2018, BHP entered into an agreement to acquire an additional 100 million shares in SolGold, for an investment of US\$59 million, with our total interest now approximately 11.2 per cent.

In November 2018, BHP confirmed identification of a potential new iron oxide, copper, gold (IOCG) mineralised system, located 65 kilometres to the south east of BHP's operations at Olympic Dam in South Australia. BHP is evaluating and interpreting the results reported and planning a further drilling program, to commence in early in the 2019 calendar year.

Variance analysis relates to the relative performance of BHP and/or its operations during the December 2018 half year compared with the December 2017 half year, unless otherwise noted. Production volumes, sales volumes and capital and exploration expenditure from subsidiaries are reported on a 100 per cent basis; production and sales volumes from equity accounted investments and other operations are reported on a proportionate consolidation basis. Numbers presented may not add up precisely to the totals provided due to rounding. Copper equivalent production based on 2018 financial year average realised prices.

The following footnotes apply to this Operational Review:

- (1) Excludes production from Onshore US.
- (2) 2019 financial year unit cost guidance: Conventional Petroleum <US\$11/boe, Escondida <US\$1.15/lb, WAIO <US\$14/t, Queensland Coal US\$68-72/t and NSWEC US\$43-48/t; based on exchange rates of AUD/USD 0.75 and USD/CLP 663.
- (3) IFRS15 Revenue from Contracts with Customers became effective for the Group from 1 July 2018.
- (4) Underlying EBIT and Underlying EBITDA are used to reflect the underlying performance of BHP. Underlying EBIT is earnings before net finance costs, taxation and any exceptional items. Underlying EBITDA is Underlying EBIT before depreciation, amortisation and impairment.
- (5) WGOB OBN 2018 Seismic Permit is OCS Permit T18-010.

The following abbreviations may have been used throughout this report: barrels (bbl); billion cubic feet (bcf); cost and freight (CFR); cost, insurance and freight (CIF); dry metric tonne unit (dmu); free on board (FOB); grams per tonne (g/t); kilograms per tonne (kg/t); kilometre (km); metre (m); million barrels of oil equivalent (MMboe); million cubic feet per day (MMcf/d); million tonnes (Mt); million tonnes per annum (Mtpa); ounces (oz); pounds (lb); thousand barrels of oil equivalent (Mboe); thousand ounces (koz); thousand standard cubic feet (Mscf); thousand tonnes (kt); thousand tonnes per annum (ktpa); thousand tonnes per day (ktpd); tonnes (t); and wet metric tonnes (wmt).

In this release, the terms 'BHP', 'Group', 'BHP Group', 'we', 'us', 'our' and ourselves' are used to refer to BHP Group Limited, BHP Group Plc and, except where the context otherwise requires, their respective subsidiaries as defined in note 27 'Subsidiaries' in section 5.1 of BHP's 30 June 2018 Annual Report on Form 20-F, unless stated otherwise. Notwithstanding that this release may include production, financial and other information from non-operated assets, non-operated assets are not included in the BHP Group and, as a result, statements regarding our operations, assets and values apply only to our operated assets unless stated otherwise.

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Production summary

		Quarter ended					Year to date	
	BHP interest	Dec 2017	Mar 2018	Jun 2018	Sep 2018	Dec 2018	Dec 2018	Dec 2017
Petroleum ⁽¹⁾								
Petroleum								
Conventional								
Crude oil, condensate and NGL (Mboe)		14,869	13,960	13,486	14,087	14,497	28,584	29,959
Natural gas (bcf)		96.1	82.9	90.7	112.3	93.9	206.2	203.4
Total (Mboe)		30,886	27,777	28,603	32,804	30,147	62,951	63,859
Copper ⁽²⁾								
Copper								
Payable metal in concentrate (kt)								
Escondida ⁽³⁾	57.5%	238.5	244.9	246.1	240.0	212.6	452.6	434.8
Antamina	33.8%	33.8	35.2	34.6	37.0	38.3	75.3	69.7
Total		272.3	280.1	280.7	277.0	250.9	527.9	504.5
Cathode (kt)								
Escondida ⁽³⁾	57.5%	76.1	69.4	70.1	55.4	71.9	127.3	148.0
Pampa Norte ⁽⁴⁾	100%	68.4	66.8	70.6	43.4	61.8	105.2	126.4
Olympic Dam	100%	12.2	40.5	42.0	33.3	31.6	64.9	54.2
Total		156.7	176.7	182.7	132.1	165.3	297.4	328.6
Total copper (kt)		429.0	456.8	463.4	409.1	416.2	825.3	833.1
Lead								
Payable metal in concentrate (t)								
Antamina	33.8%	1,009	464	546	563	600	1,163	2,424
Total		1,009	464	546	563	600	1,163	2,424
Zinc								
Payable metal in concentrate (t)								
Antamina	33.8%	29,054	25,562	35,983	30,558	24,237	54,795	58,255
Total		29,054	25,562	35,983	30,558	24,237	54,795	58,255
Gold								
Payable metal in concentrate (troy oz)								
Escondida ⁽³⁾	57.5%	50,279	59,953	68,345	63,578	73,726	137,304	100,804
Olympic Dam (refined gold)	100%	15,969	28,989	33,497	23,471	17,856	41,327	29,070
Total		66,248	88,942	101,842	87,049	91,582	178,631	129,874
Silver								
Payable metal in concentrate (troy koz)								
Escondida ⁽³⁾	57.5%	2,193	2,339	2,527	1,997	2,570	4,567	3,930
Antamina	33.8%	1,331	1,189	1,321	1,309	1,178	2,487	2,927
Olympic Dam (refined silver)	100%	135	248	278	213	212	425	266
Total		3,659	3,776	4,126	3,519	3,960	7,479	7,123
Uranium								
Payable metal in concentrate (t)								
Olympic Dam	100%	243	1,118	1,123	559	936	1,495	1,123
Total		243	1,118	1,123	559	936	1,495	1,123
Molybdenum								
Payable metal in concentrate (t)								
Antamina	33.8%	579	420	261	464	417	881	981
Total		579	420	261	464	417	881	981

Production summary

		Quarter ended					Year to date	
BHP interest		Dec 2017	Mar 2018	Jun 2018	Sep 2018	Dec 2018	Dec 2018	Dec 2017
Iron Ore								
Iron Ore								
Production (kt) ⁽⁵⁾								
Newman	85%	18,317	16,412	18,500	16,378	17,578	33,956	32,159
Area C Joint Venture	85%	13,575	12,802	12,041	11,696	10,280	21,976	26,674
Yandi Joint Venture	85%	16,348	15,802	17,339	16,870	15,627	32,497	30,907
Jimblebar ⁽⁶⁾	85%	4,583	4,669	15,092	16,333	14,320	30,653	10,866
Wheelarra	85%	8,734	8,006	614	114	30	144	16,538
Samarco	50%	-	-	-	-	-	-	-
Total		61,557	57,691	63,586	61,391	57,835	119,226	117,144
Coal								
Metallurgical coal								
Production (kt) ⁽⁷⁾								
BMA	50%	7,394	7,983	9,220	7,744	7,694	15,438	15,690
BHP Mitsui Coal ⁽⁸⁾	80%	2,291	2,396	2,789	2,614	2,578	5,192	4,562
Total		9,685	10,379	12,009	10,358	10,272	20,630	20,252
Energy coal								
Production (kt)								
Australia	100%	4,383	3,662	6,261	3,982	4,311	8,293	8,618
Colombia	33.3%	2,914	2,444	2,762	2,658	2,356	5,014	5,411
Total		7,297	6,106	9,023	6,640	6,667	13,307	14,029
Other								
Nickel								
Saleable production (kt)								
Nickel West ⁽⁹⁾	100%	23.1	21.1	25.6	21.4	18.1	39.5	46.4
Total		23.1	21.1	25.6	21.4	18.1	39.5	46.4
Cobalt								
Saleable production (t)								
Nickel West	100%	263	240	277	249	154	403	543
Total		263	240	277	249	154	403	543

- (1) LPG and ethane are reported as natural gas liquids (NGL). Product-specific conversions are made and NGL is reported in barrels of oil equivalent (boe). Total boe conversions are based on 6 bcf of natural gas equals 1 MMboe.
- (2) Metal production is reported on the basis of payable metal.
- (3) Shown on a 100% basis. BHP interest in saleable production is 57.5%.
- (4) Includes Cerro Colorado and Spence.
- (5) Iron ore production is reported on a wet tonnes basis.
- (6) Shown on a 100% basis. BHP interest in saleable production is 85%.
- (7) Metallurgical coal production is reported on the basis of saleable product. Production figures include some thermal coal.
- (8) Shown on a 100% basis. BHP interest in saleable production is 80%.
- (9) Production restated to include other nickel by-products.

Throughout this report figures in italics indicate that this figure has been adjusted since it was previously reported.

Production and sales report

		Quarter ended					Year to date	
		Dec	Mar	Jun	Sep	Dec	Dec	Dec
		2017	2018	2018	2018	2018	2018	2017
Petroleum - Conventional ⁽¹⁾								
Bass Strait								
Crude oil and condensate	(Mboe)	1,513	1,126	1,361	1,653	1,401	3,054	3,328
NGL	(Mboe)	1,584	1,170	1,428	1,840	1,447	3,287	3,534
Natural gas	(bcf)	32.9	20.5	29.9	35.1	25.2	60.3	75.5
Total petroleum products	(MMboe)	8.6	5.7	7.8	9.3	7.0	16.4	19.4
North West Shelf								
Crude oil and condensate	(Mboe)	1,442	1,377	1,267	1,514	1,520	3,034	2,916
NGL	(Mboe)	200	210	186	242	206	448	427
Natural gas	(bcf)	36.2	35.8	34.2	36.6	37.5	74.1	72.4
Total petroleum products	(MMboe)	7.7	7.6	7.2	7.9	8.0	15.8	15.4
Pyrenees								
Crude oil and condensate	(Mboe)	1,210	1,250	1,168	282	1,101	1,383	2,720
Total petroleum products	(MMboe)	1.2	1.3	1.2	0.3	1.1	1.4	2.7
Other Australia ⁽²⁾								
Crude oil and condensate	(Mboe)	8	8	7	7	8	15	17
Natural gas	(bcf)	13.3	13.4	13.9	13.8	13.9	27.7	29.4
Total petroleum products	(MMboe)	2.2	2.2	2.3	2.3	2.3	4.6	4.9
Atlantis ⁽³⁾								
Crude oil and condensate	(Mboe)	3,377	3,459	3,471	3,190	3,802	6,992	6,399
NGL	(Mboe)	195	248	217	215	268	483	413
Natural gas	(bcf)	1.8	1.8	1.5	1.5	1.9	3.4	3.4
Total petroleum products	(MMboe)	3.9	4.0	3.9	3.7	4.4	8.0	7.4
Mad Dog ⁽³⁾								
Crude oil and condensate	(Mboe)	1,231	1,140	581	1,270	1,158	2,428	2,251
NGL	(Mboe)	72	55	27	61	54	115	116
Natural gas	(bcf)	0.2	0.2	0.1	0.2	0.2	0.4	0.3
Total petroleum products	(MMboe)	1.3	1.2	0.6	1.4	1.2	2.6	2.4
Shenzi ⁽³⁾								
Crude oil and condensate	(Mboe)	2,513	2,323	2,110	2,016	2,024	4,040	4,804
NGL	(Mboe)	184	140	151	122	121	243	325
Natural gas	(bcf)	0.5	0.4	0.4	0.4	0.4	0.8	0.9
Total petroleum products	(MMboe)	2.8	2.5	2.3	2.2	2.2	4.4	5.3
Trinidad/Tobago								
Crude oil and condensate	(Mboe)	135	232	233	447	200	647	253
Natural gas	(bcf)	10.5	10.0	9.8	24.0	14.0	38.0	20.2
Total petroleum products	(MMboe)	1.9	1.9	1.9	4.4	2.5	7.0	3.6
Other Americas ^{(3) (4)}								
Crude oil and condensate	(Mboe)	207	189	313	207	218	425	436
NGL	(Mboe)	3	3	22	3	4	7	8
Natural gas	(bcf)	0.1	-	0.3	-	0.1	0.1	0.2
Total petroleum products	(MMboe)	0.2	0.2	0.4	0.2	0.2	0.4	0.5
UK ⁽⁵⁾								
Crude oil and condensate	(Mboe)	22	43	38	36	36	72	62
NGL	(Mboe)	13	18	18	21	21	42	52
Natural gas	(bcf)	0.6	0.8	0.6	0.7	0.7	1.4	1.1
Total petroleum products	(MMboe)	0.1	0.2	0.2	0.2	0.2	0.3	0.3
Algeria								
Crude oil and condensate	(Mboe)	960	969	888	961	908	1,869	1,898
Total petroleum products	(MMboe)	1.0	1.0	0.9	1.0	0.9	1.9	1.9

Production and sales report

Quarter ended					Year to date	
Dec	Mar	Jun	Sep	Dec	Dec	Dec
2017	2018	2018	2018	2018	2018	2017

Petroleum - Total ⁽¹⁾

Conventional

Crude oil and condensate	(Mboe)	12,618	12,116	11,437	11,583	12,376	23,959	25,084
NGL	(Mboe)	2,251	1,844	2,049	2,504	2,121	4,625	4,875
Natural gas	(bcf)	96.1	82.9	90.7	112.3	93.9	206.2	203.4
Total	(Mboe)	30,886	27,777	28,603	32,804	30,147	62,951	63,859

- (1) Total boe conversions are based on 6 bcf of natural gas equals 1 MMboe. Negative production figures represent finalisation adjustments.
(2) Other Australia includes Minerva and Macedon.
(3) Gulf of Mexico volumes are net of royalties.
(4) Other Americas includes Neptune, Genesis and Overriding Royalty Interest.
(5) BHP completed the sale of its interest in the Bruce and Keith oil and gas fields on 30 November 2018. The sale has an effective date of 1 January 2018.

Production and sales report

		Quarter ended					Year to date	
		Dec	Mar	Jun	Sep	Dec	Dec	Dec
		2017	2018	2018	2018	2018	2018	2017
Copper								
Metals production is payable metal unless otherwise stated.								
Escondida, Chile ⁽¹⁾								
Material mined	(kt)	101,371	103,385	106,788	107,260	105,580	212,840	206,238
Sulphide ore milled	(kt)	30,260	32,203	31,732	30,513	30,507	61,020	54,340
Average concentrator head grade	(%)	0.98%	0.96%	0.96%	0.94%	0.87%	0.91%	1.02%
Production ex mill	(kt)	245.7	252.6	253.6	241.9	219.9	461.8	449.9
Production								
Payable copper	(kt)	238.5	244.9	246.1	240.0	212.6	452.6	434.8
Copper cathode (EW)	(kt)	76.1	69.4	70.1	55.4	71.9	127.3	148.0
- Oxide leach	(kt)	27.4	24.5	27.1	19.5	23.4	42.9	49.8
- Sulphide leach	(kt)	48.7	44.9	43.0	35.8	48.5	84.3	98.2
Total copper	(kt)	314.6	314.3	316.2	295.4	284.5	579.9	582.8
Payable gold concentrate	(troy oz)	50,279	59,953	68,345	63,578	73,726	137,304	100,804
Payable silver concentrate	(troy koz)	2,193	2,339	2,527	1,997	2,570	4,567	3,930
Sales								
Payable copper	(kt)	236.7	228.3	260.3	216.5	229.2	445.7	431.8
Copper cathode (EW)	(kt)	84.1	61.7	80.9	53.2	72.3	125.5	145.7
Payable gold concentrate	(troy oz)	50,279	59,953	68,345	63,578	73,726	137,304	100,804
Payable silver concentrate	(troy koz)	2,193	2,339	2,527	1,997	2,570	4,567	3,930
(1) Shown on a 100% basis. BHP interest in saleable production is 57.5%.								
Pampa Norte, Chile								
<u>Cerro Colorado</u>								
Material mined	(kt)	20,191	17,766	17,918	18,488	19,875	38,363	41,572
Ore milled	(kt)	4,611	4,905	4,833	4,802	5,069	9,871	8,562
Average copper grade	(%)	0.59%	0.58%	0.58%	0.53%	0.62%	0.58%	0.60%
Production								
Copper cathode (EW)	(kt)	17.4	13.6	19.0	14.2	19.4	33.6	30.7
Sales								
Copper cathode (EW)	(kt)	17.7	13.7	20.9	13.8	19.0	32.8	30.0
<u>Spence</u>								
Material mined	(kt)	23,096	21,463	23,103	23,007	21,661	44,668	45,410
Ore milled	(kt)	4,919	5,144	4,009	5,642	5,428	11,070	10,294
Average copper grade	(%)	1.18%	1.03%	1.11%	1.15%	1.07%	1.11%	1.20%
Production								
Copper cathode (EW)	(kt)	51.0	53.2	51.6	29.2	42.4	71.6	95.7
Sales								
Copper cathode (EW)	(kt)	52.2	49.8	57.1	29.7	39.1	68.8	95.2

Production and sales report

Quarter ended					Year to date	
Dec	Mar	Jun	Sep	Dec	Dec	Dec
2017	2018	2018	2018	2018	2018	2017

Copper (continued)

Metals production is payable metal unless otherwise stated.

Antamina, Peru

Material mined (100%)	(kt)	59,125	58,085	59,002	62,470	62,850	125,320	118,341
Sulphide ore milled (100%)	(kt)	13,098	12,166	12,973	13,197	12,912	26,109	25,920
Average head grades								
- Copper	(%)	0.89%	1.01%	0.91%	0.96%	1.02%	0.99%	0.91%
- Zinc	(%)	0.93%	1.01%	1.19%	1.10%	0.85%	0.98%	0.96%

Production

Payable copper	(kt)	33.8	35.2	34.6	37.0	38.3	75.3	69.7
Payable zinc	(t)	29,054	25,562	35,983	30,558	24,237	54,795	58,255
Payable silver	(troy koz)	1,331	1,189	1,321	1,309	1,178	2,487	2,927
Payable lead	(t)	1,009	464	546	563	600	1,163	2,424
Payable molybdenum	(t)	579	420	261	464	417	881	981

Sales

Payable copper	(kt)	37.0	32.1	36.6	33.6	40.7	74.3	68.9
Payable zinc	(t)	30,340	26,456	33,088	31,822	26,072	57,894	55,564
Payable silver	(troy koz)	1,470	1,052	1,311	1,193	1,236	2,429	2,945
Payable lead	(t)	972	859	595	612	649	1,261	2,596
Payable molybdenum	(t)	693	500	388	208	535	743	861

Olympic Dam, Australia

Material mined ⁽¹⁾	(kt)	1,391	2,056	2,201	2,044	2,434	4,478	3,242
Ore milled	(kt)	554	2,188	2,171	1,242	2,157	3,399	2,856
Average copper grade	(%)	2.22%	2.36%	2.12%	2.05%	2.10%	2.08%	2.12%
Average uranium grade	(kg/t)	0.58	0.71	0.69	0.62	0.62	0.62	0.56

Production

Copper cathode (ER and EW)	(kt)	12.2	40.5	42.0	33.3	31.6	64.9	54.2
Uranium oxide concentrate	(t)	243	1,118	1,123	559	936	1,495	1,123
Refined gold	(troy oz)	15,969	28,989	33,497	23,471	17,856	41,327	29,070
Refined silver	(troy koz)	135	248	278	213	212	425	266

Sales

Copper cathode (ER and EW)	(kt)	24.3	36.8	46.0	33.9	26.6	60.5	55.9
Uranium oxide concentrate	(t)	338	509	1,230	765	828	1,593	1,018
Refined gold	(troy oz)	17,999	20,715	35,714	21,145	17,812	38,957	40,434
Refined silver	(troy koz)	118	202	307	216	177	393	337

(1) Material mined refers to run of mine ore mined and hoisted.

Production and sales report

Quarter ended					Year to date	
Dec	Mar	Jun	Sep	Dec	Dec	Dec
2017	2018	2018	2018	2018	2018	2017

Iron Ore

Iron ore production and sales are reported on a wet tonnes basis.

Pilbara, Australia

Production

Newman	(kt)	18,317	16,412	18,500	16,378	17,578	33,956	32,159
Area C Joint Venture	(kt)	13,575	12,802	12,041	11,696	10,280	21,976	26,674
Yandi Joint Venture	(kt)	16,348	15,802	17,339	16,870	15,627	32,497	30,907
Jimblebar ⁽¹⁾	(kt)	4,583	4,669	15,092	16,333	14,320	30,653	10,866
Wheelarra	(kt)	8,734	8,006	614	114	30	144	16,538
Total production	(kt)	61,557	57,691	63,586	61,391	57,835	119,226	117,144
Total production (100%)	(kt)	71,611	67,048	72,145	69,342	65,515	134,857	135,898

Sales

Lump	(kt)	15,145	13,993	15,173	15,014	14,020	29,034	29,041
Fines	(kt)	45,769	44,332	47,730	46,527	44,059	90,586	86,502
Total	(kt)	60,914	58,325	62,903	61,541	58,079	119,620	115,543
Total sales (100%)	(kt)	70,733	67,799	71,385	69,421	65,758	135,179	134,055

(1) Shown on a 100% basis. BHP interest in saleable production is 85%.

Samarco, Brazil ⁽¹⁾

Production	(kt)	-	-	-	-	-	-	-
Sales	(kt)	14	25	-	-	10	10	14

(1) Mining and processing operations remain suspended following the failure of the Fundão tailings dam and Santarém water dam on 5 November 2015.

Production and sales report

Quarter ended					Year to date	
Dec	Mar	Jun	Sep	Dec	Dec	Dec
2017	2018	2018	2018	2018	2018	2017

Coal

Coal production is reported on the basis of saleable product.

Queensland Coal

Production ⁽¹⁾

BMA								
Blackwater	(kt)	1,470	1,384	1,849	1,704	1,680	3,384	3,455
Goonyella	(kt)	1,369	2,314	2,639	1,989	1,813	3,802	3,008
Peak Downs	(kt)	1,367	1,723	1,658	1,131	1,662	2,793	2,969
Saraji	(kt)	1,198	1,240	1,201	1,111	1,288	2,399	2,612
Daunia	(kt)	718	547	629	620	419	1,039	1,380
Caval Ridge	(kt)	1,272	775	1,244	1,189	832	2,021	2,266
Total BMA	(kt)	7,394	7,983	9,220	7,744	7,694	15,438	15,690

BHP Mitsui Coal ⁽²⁾

South Walker Creek	(kt)	1,524	1,490	1,615	1,505	1,636	3,141	2,924
Poitrel	(kt)	767	906	1,174	1,109	942	2,051	1,638
Total BHP Mitsui Coal	(kt)	2,291	2,396	2,789	2,614	2,578	5,192	4,562
Total Queensland Coal	(kt)	9,685	10,379	12,009	10,358	10,272	20,630	20,252

Sales

Coking coal	(kt)	6,341	7,177	8,489	7,356	7,514	14,870	14,275
Weak coking coal	(kt)	2,816	2,598	2,866	2,813	3,058	5,871	5,966
Thermal coal	(kt)	173	168	85	141	157	298	275
Total	(kt)	9,330	9,943	11,440	10,310	10,729	21,039	20,516

(1) Production figures include some thermal coal.

(2) Shown on a 100% basis. BHP interest in saleable production is 80%.

NSW Energy Coal, Australia

Production	(kt)	4,383	3,662	6,261	3,982	4,311	8,293	8,618
Sales								
Export thermal coal	(kt)	4,048	3,181	5,795	3,549	4,809	8,358	7,670
Inland thermal coal	(kt)	411	400	160	332	393	725	816
Total	(kt)	4,459	3,581	5,955	3,881	5,202	9,083	8,486

Cerrejón, Colombia

Production	(kt)	2,914	2,444	2,762	2,658	2,356	5,014	5,411
Sales thermal coal - export	(kt)	2,619	2,480	2,763	2,589	2,297	4,886	5,137

Production and sales report

Quarter ended					Year to date	
Dec	Mar	Jun	Sep	Dec	Dec	Dec
2017	2018	2018	2018	2018	2018	2017

Other

Nickel production is reported on the basis of saleable product

Nickel West, Australia

Mt Keith

Nickel concentrate	(kt)	49.8	44.9	55.6	50.2	44.9	95.1	104.2
Average nickel grade	(%)	20.3	21.3	18.8	18.9	19.8	38.7	40.7

Leinster

Nickel concentrate	(kt)	87.6	54.7	78.4	78.8	65.3	144.1	166.3
Average nickel grade	(%)	8.8	9.3	9.8	8.4	8.4	16.8	18.1

Saleable production

Refined nickel ^{(1) (2)}	(kt)	17.7	19.2	18.5	19.8	16.3	36.1	33.7
Intermediates and nickel by-products ^{(1) (3)}	(kt)	5.4	1.9	7.1	1.6	1.8	3.4	12.7
Total nickel ⁽¹⁾	(kt)	23.1	21.1	25.6	21.4	18.1	39.5	46.4

Cobalt by-products	(t)	263	240	277	249	154	403	543
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Sales

Refined nickel ^{(1) (2)}	(kt)	17.7	19.5	17.5	19.3	17.3	36.6	34.0
Intermediates and nickel by-products ^{(1) (3)}	(kt)	6.9	2.5	6.3	2.2	2.1	4.3	11.9
Total nickel ⁽¹⁾	(kt)	24.6	21.9	23.8	21.5	19.4	40.9	45.9

Cobalt by-products	(t)	263	240	277	249	154	403	543
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(1) Production and sales restated to include other nickel by-products.

(2) High quality refined nickel metal, including briquettes and powder.

(3) Nickel contained in matte and by-product streams.

Production and sales report

		Quarter ended					Year to date	
		Dec	Mar	Jun	Sep	Dec	Dec	Dec
		2017	2018	2018	2018	2018	2018	2017
Onshore US - Discontinued operations ⁽¹⁾⁽²⁾								
Eagle Ford ⁽³⁾								
Crude oil and condensate	(Mboe)	3,720	2,838	3,826	3,256	1,035	4,291	7,177
NGL	(Mboe)	2,100	1,555	1,767	1,919	614	2,533	3,956
Natural gas	(bcf)	14.4	12.6	13.9	13.8	4.3	18.1	28.2
Total petroleum products	(MMboe)	8.2	6.5	7.9	7.5	2.4	9.8	15.8
Permian ⁽³⁾								
Crude oil and condensate	(Mboe)	1,142	1,398	1,903	1,478	631	2,109	2,321
NGL	(Mboe)	460	465	770	687	284	971	1,047
Natural gas	(bcf)	3.6	4.1	6.4	4.8	1.9	6.7	8.1
Total petroleum products	(MMboe)	2.2	2.5	3.7	3.0	1.2	4.2	4.7
Haynesville ⁽³⁾								
Crude oil and condensate	(Mboe)	1	-	-	11	-	11	1
NGL	(Mboe)	-	-	-	-	-	-	-
Natural gas	(bcf)	22.0	28.7	33.1	39.0	13.9	52.9	43.5
Total petroleum products	(MMboe)	3.7	4.8	5.5	6.5	2.3	8.8	7.3
Fayetteville ⁽⁴⁾								
Natural gas	(bcf)	20.5	18.7	19.1	18.6	-	18.6	42.1
Total petroleum products	(MMboe)	3.4	3.1	3.2	3.1	-	3.1	7.0
Onshore US								
Crude oil and condensate	(Mboe)	4,863	4,236	5,729	4,745	1,666	6,411	9,499
NGL	(Mboe)	2,560	2,020	2,537	2,606	898	3,504	5,003
Natural gas	(bcf)	60.5	64.1	72.5	76.2	20.1	96.3	121.9
Total	(Mboe)	17,506	16,939	20,349	20,051	5,914	25,965	34,819

(1) Total boe conversions are based on 6 bcf of natural gas equals 1 MMboe. Negative production figures represent finalisation adjustments.

(2) Volumes are net of mineral holder royalties.

(3) BHP completed the sale of its interests in the Eagle Ford, Haynesville and Permian assets on 31 October 2018.

(4) BHP completed the sale of its Fayetteville assets on 28 September 2018.