

Nexa Resources S.A.

4Q18 and 2018 Earnings Release

NEXA RESOURCES S.A. ("NEXA RESOURCES", "NEXA", OR "COMPANY") RESULTS FOR THE THREE AND TWELVE MONTHS ENDED DECEMBER 31, 2018. THIS EARNINGS RELEASE DATED AS OF FEBRUARY 15, 2019 SHOULD BE READ IN CONJUNCTION WITH THE AUDITED CONSOLIDATED FINANCIAL STATEMENTS OF NEXA AND THE NOTES THERETO FOR THE FINANCIAL YEAR ENDED DECEMBER 31, 2018. THIS DOCUMENT CONTAINS FORWARD-LOOKING STATEMENTS. PLEASE REFER TO THE CAUTIONARY LANGUAGE UNDER THE HEADING "CAUTIONARY STATEMENT ON FORWARD-LOOKING STATEMENTS".

About Nexa

Nexa's common shares have traded on the New York Stock Exchange ("NYSE") and the Toronto Stock Exchange ("TSX") under the ticker symbol "NEXA" since October 26, 2017. Nexa is a large-scale, low-cost integrated zinc producer with over 60 years of experience developing and operating mining and smelting assets in Latin America. The Company owns and operates five long-life underground polymetallic mines, of which three are located in Peru and two are located in Brazil. Nexa also operates three smelting assets, two in Brazil and one in Peru.

CEO Message – Tito Martins

"2018 was a very dynamic year for Nexa and we are proud to have delivered what we promised to the market in the first full year following our IPO. Among our achievements, we met our production guidance for all metals, updated mineral reserves and resources with significant growth in reserves, and obtained approval for the construction of a new greenfield project, Aripuanã. On the financial front, we have renegotiated part of our debt to extend maturities at lower costs and returned capital to our shareholders by distributing an US\$80 million share premium in addition to recently announcing a US\$30 million share buyback program. Also, as a result of the robust operating cash generation in 2018, we are announcing a dividend payment of US\$70 million on March 28, 2019.

While fundamentals remained strong, market confidence was impacted by the continuous trade war between China and the US, reflecting on LME prices. On the production side, we were able to deliver solid results, with a mining plan that was diligently executed along the year. Despite certain operating challenges in Cerro Lindo during mid-2018, we were able to recover production during the last quarter. We are also satisfied with our smelting segment's strong performance as we were able to reach the top of our guidance range in terms of sales volume.

In our existing operations, we are confident that, during 2019, we will be able to reap the benefits from the mining development initiatives carried out during 2018 in Cerro Lindo to support higher production guidance range provided for 2019. We will also continue investing in exploration efforts to increase reserves and find new resources in order to extend the life-of-mine of our brownfield operations. In our greenfield pipeline, we are also excited to have started the construction of the Aripuanã project this year.

We maintain our focus on financial discipline and a solid capital structure, with low leverage, that will support current and future growth. Most important, Nexa is continuously embracing best practices in terms of environment, emissions, water, dams and safety standards while supporting the development of our local communities."

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Index

About Nexa.....	1
CEO Message – Tito Martins.....	1
Highlights.....	3
Outlook 2019.....	8
Consolidated Financial Results.....	11
Market Overview	15
Business Performance	20
CAPEX.....	33
Liquidity, Indebtedness and Rating	36
Capital Resources	39
Related Party Transactions	39
Financial Instruments and Derivatives.....	39
Risk Management	40
Critical Accounting Policies and Estimates	41
Use of Non-IFRS Financial Measures	42
Internal Control Over Financial Reporting.....	424
CAUTIONARY STATEMENT ON FORWARD-LOOKING STATEMENTS	43
Appendix.....	44

Highlights

Selected indicators:

Main KPIs	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Metal sales (kt) ⁽¹⁾	158.3	160.0	155.0	2.2%	616.9	593.9	3.9%
Zn mining production (kt Zn)	103.2	90.2	102.0	1.1%	372.8	375.4	(0.7%)
Zn Eq mining production (kt) ⁽²⁾	150.0	136.9	153.5	(2.3%)	555.7	571.2	(2.7%)
Mining Cash Cost (US\$ / lb) ⁽³⁾	0.31	0.34	0.16	98.5%	0.28	0.24	20.2%
Mining AISC (US\$ / lb) ⁽⁴⁾	0.64	0.55	0.37	75.1%	0.50	0.40	25.6%
Smelting Cash Cost (US\$ / lb) ⁽³⁾	1.10	1.11	1.34	(17.9%)	1.23	1.19	3.8%
Smelting AISC (US\$ / lb) ⁽⁴⁾	1.24	1.22	1.48	(16.5%)	1.34	1.31	2.4%
Net Revenues (US\$ million)	583.4	595.1	703.0	(17.0%)	2,491.2	2,449.5	1.7%
Adjusted EBITDA (US\$ million) ⁽⁵⁾	130.8	119.8	222.5	(41.2%)	604.8	667.5	(9.4%)
Adj. EBITDA margin (%) ⁽⁵⁾	22.4%	20.1%	31.6%	(922 bp)	24.3%	27.3%	(297 bp)
Financial Results (US\$ million)	23.1	(44.3)	(90.0)	N/A	(202.7)	(130.2)	55.7%
Net income attributable to Nexa shareholders (US\$ million)	52.9	7.4	12.2	332.6%	74.9	126.9	(41.0%)
Earnings per Share (US\$)	0.40	0.06	0.10	313.9%	0.56	1.09	(48.4%)
Adj. EBITDA Mine (US\$ million) ⁽⁷⁾	88.4	65.1	179.5	(50.8%)	430.4	521.5	(17.5%)
Adj. EBITDA Smelter (US\$ million) ⁽⁷⁾	41.2	57.0	19.2	114.8%	174.8	152.7	14.4%
Capital Expenditures (US\$ million)	137.0	71.2	66.9	104.8%	299.7	197.6	51.6%
Expansion (US\$ million)	42.2	19.4	13.0	226.0%	90.5	48.8	85.4%
Non-Expansion (US\$ million)	94.8	51.8	53.9	75.7%	209.2	148.8	40.6%
Gross Debt (US\$ million)	1,425	1,420	1,447	(1.5%)	1,425	1,447	(1.5%)
Cash (US\$ million) ⁽⁸⁾	1,125	1,201	1,226	(8.2%)	1,125	1,226	(8.2%)
Net Debt (US\$ million)	302.7	221.6	225.0	34.6%	302.7	225.0	34.6%
Net Debt/LTM EBITDA (x)	0.50	0.32	0.34	48.5%	0.50	0.34	48.5%

⁽¹⁾ Consolidated sales of metallic zinc and zinc oxide (in kt of product volume). Kt refers to one thousand metric tons.

⁽²⁾ Consolidated mining production in kt of zinc equivalent calculated by converting copper, lead, silver and gold contents to a zinc equivalent grade at 2018 average benchmark prices. The prices used for this conversion are: Zinc: US\$2,922/t (US\$1.33/lb); Copper: US\$6,523/t (US\$2.96/lb); Lead: US\$2,242/t (US\$1.02/lb); Silver: US\$16/oz; Gold: US\$1,268/oz.

⁽³⁾ Zinc cash cost net of by-products credits, in dollar per pound of zinc sold.

⁽⁴⁾ Zinc all-in sustaining cost net of by-products credits, in dollar per pound of zinc sold. We updated our AISC calculations in order to include not only sustaining capital expenditures ("CAPEX") but also health, safety and environment, tailing dams and other non-expansion related CAPEX. For AISC reconciliation, please see pages 56-59.

⁽⁵⁾ Refer to "Use of Non-IFRS Financial Measures" for further information. ⁽⁷⁾ The sum of segment adj. EBITDA does not equal consolidated adj. EBITDA due to adjustments before consolidation, please refer to the 2018 Financial Statements note 1.

⁽⁸⁾ Cash, cash equivalents and financial investments.

Financial Performance:

- **Revenues of US\$2,491 million in 2018** were 1.7% higher than in 2017 due to slightly higher metal prices combined with higher metal sales. In 4Q18, revenues of US\$583 million were 17.0% lower compared to 4Q17, driven by lower metal prices, partially offset by higher sales volumes from our smelters.

- **Adjusted EBITDA was US\$605 million in 2018**, a decrease of 9.4% compared to 2017, as a result of higher costs and lower by-product credits mainly driven by lower LME. In 4Q18 Adj. EBITDA reached US\$131 million compared to US\$222 million in 4Q17 – lower by 41.2% due to a significant decrease in LME prices.
- **Adjusted EBITDA margin was 24.3% in 2018** compared to 27.3% in the previous year. In 4Q18, the margin reached 22.4% compared to 31.6% in 4Q17.
- **Net Debt/Adj. EBITDA of 0.50x** as of December 31, 2018.
- **Strong capital structure, with average maturity of the US\$1,429 million total debt¹ of 6.1 years** at an average cost of 4.8% as of December 31, 2018, with only 18% of the total debt maturing by 2022.
- **Cash position of US\$1,125 million** as of December 31, 2018 (cash and cash equivalents plus financial investments).
- **CAPEX reached US\$300 million in 2018**, including US\$137 million invested in 4Q18. CAPEX was US\$40 million above our 2018 guidance of US\$260 million, as we expedited some investments at the end of the year (~US\$8 million related to Magistral and ~US\$7 million related to Vazante), we also recorded a US\$14 million of operating expenses related to the Atacocha and El Porvenir integration which were reclassified as CAPEX and also incurred higher sustaining CAPEX in Cerro Lindo due to mine development initiatives.
- **Net income** attributable to Nexa's shareholders amounted to US\$75 million in 2018, compared to US\$127 million in 2017 primarily negatively impacted by foreign exchange. In 4Q18, net income amounted to US\$53 million, compared to US\$12 million in 4Q17, mostly due to tax credits recognized in October 2018, as we present in "Consolidated Financial Results".

Mining Performance:

- **Production by metal** in 2018 was within the annual guidance range for all metals and we surpassed the top of the range of our guidance for gold by 16%, which we had recently revised upward. 2018 production totaled 373kt of zinc, 39kt of copper, 52kt of lead, 7,992koz of silver and 29koz of gold compared to 375kt of zinc, 44kt of copper, 53kt of lead, 7,946koz of silver and 33 koz of gold in 2017.
- Zinc equivalent metal production totaled 556kt in 2018, down 3% compared to 571kt in the same period of the previous year mainly driven by the lower copper production as a result of lower grades.
- As discussed in previous quarters, as part of a program to accelerate mine development at Cerro Lindo which started in 1H18, we developed new stopes which allowed us to accelerate production in 4Q18. During 4Q18, our zinc equivalent production stabilized at a higher level at 150kt, up 11% and 10% from 135kt in 2Q18 and 137kt in 3Q18, respectively. During the month of December, Cerro Lindo's processing plant reached record high feeding volumes, resulting in the highest zinc, lead, and gold production levels for the year.
- **Production by metal** in 4Q18 totaled 103kt of zinc, 9kt of copper, 15kt of lead, 2,197koz of silver and 8koz of gold compared to 102kt of zinc, 11kt of copper, 15kt of lead, 2,271koz of silver and 8koz of gold in the same period of 2017.
- **Mine production composition (per mine) on a zinc equivalent basis:** In 4Q18, the Peruvian Cerro Lindo mine accounted for 45.6% of total production, followed by the Vazante, El Porvenir, Atacocha and Morro Agudo mines, which accounted for 24.4%, 15.3%, 7.7% and 7.0%, respectively. Continuous zinc equivalent volume improvements in Morro Agudo, El Porvenir, and

¹ Our total debt refers to short and long-term loans and financing.

Vazante (up 80%, 4%, and 3%, respectively) partially offset the decrease of 13% in Cerro Lindo production and 3% in Atacocha production, explained in detail in each asset section in this report.

- **Cash cost net of by-products credits** increased by 98.5% to US\$0.31/lb (or US\$694/t) in 4Q18 compared to US\$0.16/lb (or US\$349/t) in 4Q17, mainly due to: (i) lower by-products credits (-US\$0.17/lb or US\$369/t) which were impacted by lower metal prices and lower sales in Peru; and (ii) higher operating costs (+US\$0.03/lb or US\$72/t) particularly in Peru due to higher development services costs (+US\$0.02/lb or US\$36/t) and higher materials costs (+US\$0.01/lb or US\$19/t). These impacts were partially offset by devaluation of the BRL (-US\$0.02/lb or US\$47/t) and lower treatment charges (-US\$0.01/lb or US\$30/t).
- **All-in sustaining cost net of by-products credits ("AISC")** also increased in 4Q18, amounting to US\$0.64/lb (or US\$1,417/t), 75.1% higher than in 4Q17, impacted by the reasons mentioned above together with the higher CAPEX in 4Q18 when compared to 4Q17 as indicated in our annual CAPEX guidance.

Smelting Performance:

- We also met our **metallic zinc sales** guidance for 2018. Metallic zinc sales including zinc oxide reached 617kt in 2018, 4% higher than 2017 sales of 594kt, mainly driven by higher sales volume at our Cajamarquilla and Três Marias smelters which increased 6% and 3%, respectively. Sales of metallic zinc in 4Q18 were 158kt, 2% higher than in 4Q17.
- **Cash cost net of by-products credits** decreased by 17.9% to US\$1.10/lb (or US\$2,420/t) in 4Q18, compared to US\$1.34/lb (or US\$2,947/t) in the same period of the previous year, mainly due to (i) lower raw material costs driven by lower zinc prices (-US\$0.23/lb or US\$507/t), (ii) Brazilian currency devaluation in the period (-US\$0.01/lb or US\$25/t), and (iii) higher credits from by-products (+US\$0.02/lb or US\$42/t), partially offset by lower treatment charges (+US\$0.03/lb or US\$55/t). Our cash cost net of by-products credits is measured with respect to zinc.
- **AISC** decreased 16.5% in 4Q18, to US\$1.24/lb (or US\$2,726/t), impacted by the reasons listed above and partially offset by a higher sustaining CAPEX.

Projects and Operations Developments:

- **Cerro Lindo, Peru:**
 - o As of the end of 2018, 6km have been drilled in 12 diamond drill holes in the Orcocobre region, north of the Topara River and 2km from Cerro Lindo. So far, we have intercepted hydrothermal alteration and marginal mineralization both characteristic of a VMS system (same mineralization style as Cerro Lindo mine). We intend to drill an additional 20km of diamond drilling during 2019.
 - o Mine development initiatives increased from ~2,400 meters per month at the beginning 2018 to ~3,200 meters per month in the last two quarters, a 33% increase, which enabled us to increase production in 4Q18. In 2019, we expect to maintain mine development initiatives of ~3,000 meters per month until 3Q19.
 - o During 3Q18 local agencies granted the construction license for the new waste deposit and construction progress reached 59% during 4Q18.
 - o The contractor selection process was also concluded for the replacement of the seawater pipeline for the desalination plant. All the acquired pipeline material has been received. We estimate the new pipeline to start operating in 2Q19.

- **Vazante, Brazil:**

- The detailed engineering for the dry stacking disposal was concluded and the long lead items (thickener and filter) have been delivered at site. The construction has reached 85% physical progress primarily due to the effective performance by the civil and electromechanical assembly contractor in earthworks, civil works and steel structure erection. Project start-up is planned for 2Q19.

- **Cajamarquilla, Peru:**

- The Jarosite conversion process in Cajamarquilla has progressed 47% with the conclusion of detailed engineering, contract award for the key procurement and the conclusion of the electromechanical contractor selection. We expect this conversion to improve recovery rates from 94% to approximately 97%.

- **Aripuanã, Brazil (greenfield)**

- On October 19, 2018, Nexa's Board of Directors approved the construction of the Aripuanã project after the conclusion of the feasibility study and detailed analysis by the Company's management. On December 20, 2018, we were granted the Installation License ("LI") from the Environmental Authority of the State of Mato Grosso (SEMA/MT). We have finalized the key procurement process to initiate construction.
- The Company filed a Technical Report (dated October 15, 2018) summarizing the results of the feasibility study, including **first-time public disclosure of mineral reserves** estimate. The average zinc equivalent production of the Aripuanã project is estimated at 120 thousand tonnes per year for 13 years, considering only the proven and probable mineral reserves estimated at 26.2 million tonnes in accordance with CIM (2014) Definition Standards as incorporated in National Instrument 43-101 – Standards for Disclosure for Minerals Projects ("NI 43-101").
- We have entered an EPCM contract with SNC Lavalin.
- Detailed engineering is under development by SNC Lavalin in accordance with the plan.
- We have concluded the procurement process for long lead time items like:
 - 34.5kV (provisional) and 69kV (definitive) transmission lines;
 - Flotation cells/columns;
 - Thickeners;
 - Press filters;
 - Comminution package, including crushers, SAG/Ball/vertical mills.
- The procurement process for the civil and electromechanical contractor has been concluded and the contract has been awarded.
- Early works on construction started at the mine, mainly with the box cut for ramp tunnel development. These declines will enable Nexa to advance its exploration activities and also the operational mine development. Additionally, some temporary facilities have been constructed to coordinate the early works at site.

- The Aripuanã project is expected to be operational by early 2021, with total CAPEX estimated at approximately US\$392 million (for 100% of Aripuanã²) and we plan on spending 35% of this total capex (~US\$140 million) during 2019.
- The Company entered derivative contracts to mitigate its exposure to foreign currency risk associated with changes in the Brazilian real exchange rate for the majority of the estimated Brazilian real share of the CAPEX of the project.

Corporate Highlights

- **Dividends:** On February 15, 2019, the Board of Directors approved, subject to ratification by the Company's shareholders at the upcoming annual shareholders' meeting in accordance to Luxembourg laws, a cash dividend of US\$0.525494 per common share, or approximately US\$70 million, considering 133,208,125 shares outstanding as of December 31, 2018, to shareholders of the Company of record at the close of business on March 14, 2019. The cash dividend is expected to be paid on March 28, 2019.
- **Share repurchase program:** During 2018, we repurchased 112,388 common shares, at an average price of US\$12.00 per share, for an aggregate purchase price of US\$1.350 million. The common shares repurchased in 2018 represent 0.24% of the free float of common shares outstanding before the launch of the program. This program was approved by the Board of Directors on September 20, 2018, under which the Company, directly or indirectly through its subsidiaries may repurchase, from time to time, up to US\$30 million of its outstanding common shares over the 12-month period beginning on November 6, 2018 and ending on November 6, 2019. Under the share buyback program, the Company may repurchase shares for cash in accordance with all applicable securities laws and regulations and within the limits of the authorization approved at the Company's general shareholders' meeting held on September 13, 2018 (up to 6.5 million shares). The share buyback program is being executed on the New York Stock Exchange through an authorized broker. The repurchased shares will not be cancelled but held in treasury at this time.
- **CFO Transition:** The Company announced on January 29, 2019, that its Board of Directors has approved the appointment of Rodrigo Menck to succeed Mario Bertoncini as Nexa's Senior Vice-President of Finance and CFO starting March 1st, 2019. Mr. Bertoncini is leaving the Company to assume a new leadership role at CESP - Companhia Energética de São Paulo, a publicly traded Brazilian power generation company whose major shareholder is a joint venture between Votorantim Energia and the Canada Pension Plan Investment Board (CPP-IB). Mr. Bertoncini has served as Senior Vice President of Finance and CFO since 2014.

Mr. Menck holds a degree in Business Administration and an MBA from the University of São Paulo, Brazil. An executive with more than 20 years of experience in treasury, structured finance and capital markets, Mr. Menck worked for more than ten years in banks such as BankBoston, Itau, WestLB, Citi and BNP Paribas, before joining Braskem both as Structured Finance Manager and Finance & Shared Services Director. He joined Nexa in 2016 as Head of Treasury & Investor Relations, where he led teams fundraising in capital markets and carried out other responsibilities as well as being directly involved in the Company's initial public offering. His previous position at Nexa was Head of M&A.

² Nexa owns 70% of the project through its subsidiaries.

Outlook 2019

As mentioned above, we met our 2018 mining production guidance for all metals, driven by a production recovery in 4Q18, as planned. Our smelting segment had a strong performance throughout 2018, reaching the top of the range of our sales volume guidance.

For 2019, we expect zinc mining production to expand approximately 3% versus 2018, assuming the mid-range of the announced guidance presented below.

Below we reinforce our 2019 annual guidance for production, capex, and expenses related to project development and mineral exploration as published on January 15, 2019.

Mining (metal contained in concentrate)	2018 Actual	2019 Guidance		
Zinc (kt)	373	375	-	395
Copper (kt)	39	37	-	40
Lead (kt)	52	52	-	57
Silver (koz)	7,992	8,000	-	8,600
Gold (koz)	29	21	-	23
Smelting sales	2018 Actual	2019 Guidance		
Zinc Metal (kt)	579	573	-	591
Zinc Oxide (kt)	38	37	-	39
Total	617	610	-	630

Production

The main assumptions behind the 2019 annual production guidance are:

Mining Segment: (i) a 3% increase in zinc production compared to 2018 (assuming mid-range of 2019 guidance versus 2018 actual) as a result of higher treated ore volumes compensating for forecasted lower grades; (ii) production stabilization close to the level achieved in 4Q18 at Cerro Lindo, already reflecting the benefits from the mining development initiatives carried out during 2018 (we note that our Cerro Lindo plant is already operating close to its 21,000 ton processing capacity per day, which we believe can be sustained throughout 2019); (iii) stabilization of production at the Cerro Pasco mines (El Porvenir and Atacocha) after several safety procedures and changes in processes were implemented during 2018; and (iv) productivity gains in Brazil (mainly with the implementation of an additional worker shift in Vazante, increasing operating hours).

Smelting Sales: we expect relatively stable sales volumes YoY, considering the mid-range of our guidance, with a 0.8% increase in production available for sale, assuming: (i) potential slowdown at Cajamarquilla during the implementation of the Jarosite process conversion during 3Q19; and (ii) regular production throughout 2019 across all our smelters (with some productivity gains in Três Marias and Juiz de Fora). We note that despite the potential short-term production slowdown from the Cajamarquilla conversion process, we expect a ~3% gain in recovery rates (from ~94% to ~97%) once the process is fully implemented by 2020. We estimate some productivity gains in Três Marias from increased use of silicate mix from 69% to 71% of the total feed and higher participation of secondary feed materials in our Juiz de Fora smelter from 20% to 22%.

Capital expenditures ("CAPEX")

In 2019, we are increasing our CAPEX compared to 2018. This is primarily due to our initial investment in the Aripuanã project, our most advanced greenfield project in the pipeline. We received the Installation License for Aripuanã on December 20, 2018 and started investing in construction immediately. We estimate we will spend approximately 35% (or US\$140 million)⁽¹⁾ of the total US\$392 million capex estimated for the Aripuanã project in 2019. Excluding Aripuanã, our planned investments for 2019 total approximately US\$280 million, the same level of 2018.

Nearly half of our capital expenditures in 2019 will be directed towards expansion continuously focusing on brownfield life of mine extension and our greenfield projects' pipeline. Please find the breakdown of our CAPEX guidance per segment and categories in the tables below. For more details on the CAPEX executed in 2018, please refer to page 33.

Capex per segment (US\$mm)	2018 Actual	2019 Guidance	% Total
Mining (ex. Aripuanã)	171	177	42%
Smelting	93	94	22%
Others	16 ⁽³⁾	9	2%
Subtotal	281	280	100%
Aripuanã	19 ⁽¹⁾	140 ⁽¹⁾	33%
Total	300	420	100%

⁽¹⁾ Assumes Nexa will invest 100% of the 2019 capex estimated for Aripuanã. Nexa holds a 70% stake in the Aripuanã project.

Capex per category (US\$mm)	2018 Actual	2019 Guidance	% Total
Expansion/Greenfield	91	198 ⁽²⁾	47%
Modernization	15	24	6%
Sustaining	90	116	28%
HS&E/Tailing dams	89	72	17%
IT/Others	15	10	2%
Total	300	420	100%

⁽²⁾ Includes US\$140mm capex estimated for the Aripuanã project construction.

The main projects/investments to be developed over 2019 are primarily related to expansion, including: (i) US\$140 million for the Aripuanã project construction; (ii) US\$24 million for the Vazante mine deepening to extend its life of mine; and (iii) US\$24 million for the Jarosite conversion process at the Cajamarquilla smelter.

Expenses related to Project Development and Mineral Exploration⁴

(US\$mm)	2018 Actual	2019 Guidance	% Total
Mineral exploration	83	75	59%
Project development	43	53	41%
Total	126	128	100%

Exploration and project development expenses consider several stages of development, from mineral potential definition, R&D, and subsequent scoping and pre-feasibility studies (FEL1 and FEL2).

In mineral exploration, we continue our efforts to increase reserves and resources, aiming an average life of mine of 12 years for our current operations. Our mineral exploration expense guidance of US\$75 million relates mainly to brownfield (US\$36 million) and greenfield (US\$33 million) exploration. Our project development expense guidance of US\$53 million includes US\$30 million directed towards

³ Includes capex related to Magistral greenfield (US\$8 million) and corporate projects.

⁴ Including exploration, expansion, modernization, R&D, health, safety and environment among others.

projects in FEL1 & FEL2 stages, of which US\$23 million is related to greenfields (~US\$14 million for Shalipayco) and US\$7 million to brownfields.

These estimates (guidance) are based on several assumptions that management believes to be reasonable and representative of the Company's expectations as of the publication of this report. Our independent registered public accounting firm has not audited, compiled, performed any procedures on, or reviewed these estimates and, therefore does not express an opinion or any other form of assurance with respect to these estimates. Accordingly, you should not place undue reliance on these estimates, which may differ materially from our final results. Please refer to the Cautionary Statement on Forward-Looking Statements at the end of this release.

Consolidated Financial Results

US\$ million	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Net Revenues	583.4	595.1	703.0	(17.0%)	2,491.2	2,449.5	1.7%
Cost of sales	(441.6)	(488.1)	(468.2)	(5.7%)	(1,888.9)	(1,752.8)	7.8%
Raw materials and consumables used	(319.2)	(196.1)	(326.6)	(2.2%)	(1,125.9)	(1,118.2)	0.7%
Employee benefit expenses	(25.5)	(46.0)	(54.1)	(52.9%)	(159.3)	(187.7)	(15.1%)
Depreciation, amortization and depletion	(60.9)	(65.6)	(68.9)	(11.5%)	(262.9)	(265.8)	(1.1%)
Services, miscellaneous	(26.5)	(129.9)	(36.2)	(26.8%)	(216.7)	(112.4)	92.8%
Other expenses	(9.5)	(50.5)	17.4	N/A	(124.1)	(68.8)	80.5%
SG&A	(35.8)	(36.6)	(40.2)	(10.9%)	(159.6)	(154.5)	3.3%
Selling ⁽¹⁾	(6.1)	(4.2)	(5.3)	14.0%	(19.0)	(17.6)	7.7%
General & Admin	(29.8)	(32.4)	(34.9)	(14.7%)	(140.6)	(136.9)	2.7%
Mineral exploration and project development	(46.3)	(33.1)	(37.4)	23.9%	(126.3)	(92.7)	36.2%
Other Operating Results	5.8	16.0	(4.8)	N/A	18.2	(47.9)	N/A
Environmental and asset retirement obligations	(5.5)	4.5	13.2	N/A	12.1	0.4	2689.4%
Judicial provision	1.2	(1.0)	0.3	361.2%	(3.7)	0.3	N/A
Mining Obligations	(2.8)	(3.4)	(2.4)	17.0%	(12.6)	(11.5)	9.9%
Loss on sale of property, plant & equipment and intangibles assets	(1.0)	(0.2)	2.6	N/A	(9.9)	(0.7)	1324.2%
Corporate projects	(4.5)	(3.9)	(8.2)	(44.5%)	(13.4)	(12.9)	3.8%
Net operating hedge loss	(5.9)	16.0	(6.8)	(12.9%)	17.5	(18.8)	N/A
Gain on sale of investments	0.0	0.0	0.0	N/A	0.3	4.6	(92.4%)
PIS and Cofins tax credits	37.6	0.0	0.0	N/A	37.6	0.0	N/A
Others	(13.2)	3.9	(3.5)	283.2%	(9.7)	(9.2)	5.2%
Net Financial Result	23.1	(44.3)	(90.0)	N/A	(202.7)	(130.2)	55.7%
Financial income	41.0	7.2	4.8	759.2%	67.5	29.9	126.0%
Financial expenses	(30.8)	(29.4)	(25.1)	22.9%	(121.7)	(106.2)	14.6%
Foreign exchange gains (loss), net	12.9	(22.1)	(69.7)	N/A	(148.5)	(53.9)	175.6%
Depreciation, amortization and depletion	62.0	66.6	70.1	(11.6%)	267.2	270.5	(1.2%)
Adjusted EBITDA	130.8	119.8	222.5	(41.2%)	604.8	667.5	(9.4%)
Adj. EBITDA Margin	22.4%	20.1%	31.6%	(922 bp)	24.3%	27.3%	(297 bp)
Income Tax	(31.8)	(2.0)	(38.3)	(17.0%)	(40.9)	(106.2)	(61.5%)
Net Income	56.6	6.9	23.9	136.9%	91.0	165.2	(44.9%)
Attributable to Nexa shareholders	52.9	7.4	12.2	332.6%	74.9	126.9	(41.0%)
Attributable to non-controlling interests	3.8	(0.4)	11.8	(67.9%)	16.1	38.4	(58.0%)
Avg # of shares (in '000)	133,293	133,320	127,527	(100.0%)	133,314	116,527	14.4%
EPS attributable to Nexa shareholders (in US\$)	0.40	0.06	0.10	313.9%	0.56	1.09	(48.4%)

Note: Information regarding each of the last eight quarters is available in the appendix. A reconciliation of adjusted EBITDA is available at the end of this section.

⁽¹⁾ Freight costs were reclassified from selling expenses to cost of sales in 1Q18 and previous quarters due to the initial adoption of IFRS 15 in 2018.

Net Revenues totaled US\$583 million in 4Q18, a decrease of 17.0%, or US\$120 million, when compared to US\$703 million in 4Q17, mainly due to lower base metals prices in the global market. The average LME zinc price in 4Q18 was 18.7% lower than the average in the same quarter of 2017. Copper and lead LME prices also decreased by 9.3% and 21.2%, respectively. Revenues totaled US\$2,491 million in full year 2018, up 1.7% compared to US\$2,449 million while the average LME zinc price was slightly higher, up 0.9% when comparing FY18 and FY17, copper and lead LME prices were 5.8% higher and 3.2% lower, respectively.

Cost of sales decreased by 5.7% in 4Q18, totaling US\$442 million compared to US\$468 million in 4Q17, mainly due to lower cost concentrate purchased by our smelters. The cost of sales for the full year 2018 was 7.8% higher than 2017, US\$1,889 million and US\$1,753 million, respectively, mainly reflecting higher costs related to improvements on safety standards and higher cost of concentrate purchased by our smelters in 1H18.

SG&A expenses totaled US\$36 million in 4Q18, compared to US\$40 million in 4Q17. The 4Q18 total is composed of US\$6 million in selling expenses and US\$30 million in general and administrative (G&A) expenses. G&A expenses decreased by 14.7%, or US\$5 million mainly due to the Brazilian currency devaluation. SG&A totaled US\$160 million in the twelve months period, up 3.3% compared to US\$154 million recorded in the FY17.

Other operating results were a positive US\$6 million in 4Q18 compared to a US\$5 million expense in 4Q17. This result is mainly explained by a tax credit of US\$34 million recognized in 4Q18 based on a final decision by the Regional Federal Court (TRF) in October 2018 that granted Nexa Recursos Minerais S.A. the right to recover federal tax credits amounting to US\$60 million, being US\$34 million the principal amount and recognized at "Other operating expenses, net" and US\$26 million corresponding to interest and recognized as "Financial income".

Mineral exploration and project development totaled US\$46 million, 23.9% higher than US\$37 million in the 4Q17, mainly due to higher expenses in projects development such as Magistral and Pukaqaqa. In FY18, those expenses totaled US\$126 million, 36.2% higher than 2017, reflecting the continuous efforts to expand our growth opportunities and in line with our plan to expand resources and reserves.

Net financial results amounted to an income of US\$23 million in 4Q18, compared to a loss of US\$90 million in 4Q17, a positive variation of US\$113 million, mainly due to US\$26 million of interest on tax credit in 4Q18 (as explained above) and non-cash foreign exchange losses of US\$70 million incurred in 4Q17 (primarily a result of the impact of foreign exchange variation on the intercompany loans, as explained below). For the full year 2018, net financial results accounted to a loss of US\$203 million, also driven by non-cash foreign exchange losses and compared to a loss of US\$130 million in 2017.

Foreign exchange losses, net are mainly related to certain US dollar denominated intercompany debt of Nexa Recursos Minerais S.A. ("Nexa Brazil") with NEXA Resources (Luxembourg).

Intercompany loans balances are fully eliminated in the consolidated financial statements; however, foreign exchange gains or losses are not eliminated in the consolidated financial statements, and are presented as foreign exchange loss, net. As of December 31, 2018, the outstanding intercompany balance was US\$511 million (versus US\$1,113 million at December 31, 2017).

Consistent with the Company's strategy of reducing its exposure to foreign exchange fluctuations, Nexa prepaid a total of US\$600 million of the outstanding principal amount of the aforementioned intercompany loans during 2018.

Income tax expense was US\$32 million in 4Q18, compared to a US\$38 million tax expense in 4Q17. Income tax expense for full year 2018 totaled US\$41 million compared to US\$106 million in 2017 as a result of lower earnings before tax in 2018. Also, the effective tax rate decreased from 39% in 2017 to 31% in 2018 due to tax losses of US\$47 million incurred in Nexa Brasil and US\$6 million in Nexa Cajamarquilla during 2018.

Net income attributable to Nexa's shareholders amounted to US\$53 million in 4Q18, compared to US\$12 million in 4Q17, due to the aforementioned impacts (mainly the positive impact of the tax

credit). In the twelve-month period ended December 31, 2018, net income attributable to Nexa's shareholders amounted to US\$75 million, compared to US\$127 million in 2017. Such difference is primarily due to the negative impact of foreign exchange in the 9M18.

4Q18 EPS was US\$0.40 per share, compared to US\$0.10 in 4Q17. For the full year 2018 and 2017, EPS was US\$0.56 per share and US\$1.09 per share, respectively.

Adjusted EBITDA⁵ totaled US\$131 million in 4Q18, a decrease of 41.2% or US\$92 million when compared to the same quarter of the previous year, mostly due to lower metal prices affecting revenues as previously explained. In the twelve-month period ended on December 31, 2018, the adjusted EBITDA totaled US\$605 million, down 9.4% compared to US\$668 million in 2017.

The following table presents a reconciliation of adjusted EBITDA to net income.

US\$ million	4Q18	3Q18	4Q17	FY18	FY17
Adjusted EBITDA	130.8	119.8	222.5	604.8	667.5
Gain (loss) on sales of investments	0.0	0.0	0.0	(0.3)	(4.6)
Impairment (Reversal)	3.4	(0.0)	0.0	3.4	0.0
EBITDA	127.4	119.8	222.4	601.7	672.0
Results of investees	0.0	0.0	(0.1)	0.0	(0.1)
Deprec. and amort.	(62.0)	(66.6)	(70.1)	(267.2)	(270.5)
Net financial results	23.1	(44.3)	(90.0)	(202.7)	(130.2)
Taxes on income	(31.8)	(2.0)	(38.3)	(40.9)	(106.2)
Net Income	56.6	6.9	23.9	91.0	165.2

Financial – Mining Segment^{6,7}

US\$ million	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Net Revenues	285.5	249.6	374.7	(23.8%)	1,163.7	1,213.2	(4.1%)
COGS	(176.6)	(178.5)	(178.7)	(1.2%)	(694.0)	(680.8)	1.9%
Gross Profit	108.9	71.2	196.0	(44.4%)	469.7	532.4	(11.8%)
Adjusted EBITDA	88.4	65.1	183.0	(51.7%)	430.4	521.5	(17.5%)
Adj. EBITDA Mrg	31.0%	26.1%	48.8%	(36.6%)	37.0%	43.0%	(14.0%)

Net Revenues for the mining segment totaled US\$286 million in 4Q18, a decrease of 23.8%, or US\$89 million, when compared to US\$375 million in 4Q17. The main drivers for the decrease in net revenues are: (i) a decrease in zinc, lead and copper market prices in 4Q18 in comparison to 4Q17, impacting concentrates sales by approximately US\$75 million, (ii) reduced volumes mainly in Cerro Lindo, due to lower treated ore and lower grades (impact of approximately US\$26 million), (iii) lower silver and gold content (impact of approximately US\$11 million) which were partially offset by (iv) increased volumes of zinc and copper across our other mining units (excluding Cerro Lindo) due to higher treated ore and higher zinc grades (a positive impact of approximately US\$17 million) and (v) lower treatment charges. The average LME zinc, copper and lead prices decreased by 18.7%, 9.3% and 21.2%, respectively in 4Q18 compared to 4Q17.

During the full year 2018, net revenues amounted to US\$1,164 million, 4.1% lower than the US\$1,213 million in 2017, mainly due to lower zinc and copper volumes (impact of nearly US\$109 million) in the period, partially offset by a slight increase in zinc and copper prices (positively impacting revenues by

⁵ Non-IFRS financial measure. See "Use of Non-IFRS Financial Measures" section for further information.

⁶ For details on segment definition and accounting policy please refer to explanatory note 1 – "Information by business segment and geographic area" in our Financial Statements.

⁷ Segment consolidation available in the appendix.

approximately US\$26 million) and increased zinc and copper volumes in El Porvenir due to higher treated ore and improved zinc and copper grades (positive impact of US\$38 million).

Cost of sales increased by 1.2% in 4Q18, totaling US\$177 million compared to US\$179 million in the 4Q17. This increase was driven by (i) higher maintenance costs in El Porvenir, Cerro Lindo, Morro Agudo and Vazante and higher mine development costs in Cerro Lindo and El Porvenir in order to increase the short-term production partially offset by (ii) the depreciation of the Brazilian currency positively impacting COGS in Brazil.

Cost of sales for the full year 2018 amounted to US\$694 million, up 1.9% compared to 2017. As mentioned in previous quarters, the process revisions started in 2H17 aimed at reinforcing safety conditions in the Company's mines (which are now standard) have been impacting costs since then.

Adjusted EBITDA totaled US\$88 million for the mining segment in 4Q18, a US\$95 million or 52% decrease when compared to the same quarter of the previous year, mainly due to (i) lower LME prices which impacted revenues; (ii) higher costs related to sustaining, equipment and maintenance in Cerro Lindo as well as development costs in Cerro Lindo and El Porvenir; and (iii) lower by-product revenues. These negative impacts were partially offset by FX-related gains and lower provisions for employee profit sharing.

During 2018, adjusted EBITDA for the mining segment totaled US\$430.4 million, 18% lower than the US\$522 million recorded in 2017. This decrease was mainly driven by: (i) higher sustaining costs in Cerro Lindo; (ii) higher maintenance costs in Morro Agudo and Vazante; and (iii) the implementation of the fourth work shift in Vazante, partially offset by (iv) the increase in zinc and copper average prices during the year.

Financial - Smelting^{8,9}

US\$ million	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Net Revenues	470.0	483.0	564.3	(16.7%)	2,030.6	1,952.0	4.0%
COGS	(435.7)	(444.1)	(501.5)	(13.1%)	(1,876.0)	(1,746.8)	7.4%
Gross Profit	34.3	38.9	62.8	(45.3%)	154.5	205.2	(24.7%)
Adjusted EBITDA	41.2	57.0	31.5	30.9%	174.8	152.7	14.4%
Adj. EBITDA Mrg	8.8%	11.8%	5.6%	57.1%	8.6%	7.8%	10.0%

Net Revenues for the smelting segment totaled US\$470 million in 4Q18, down 16.7%, or US\$94 million compared to US\$564 million in 4Q17. The main drivers for this decrease were lower zinc metal prices (negatively impacting revenues by US\$100 million), and lower treatment charges in the international market. These impacts were partially offset by higher sales volume of metallic zinc, which positively impacted revenues by approximately US\$9 million.

Net Revenues totaled US\$2,031 million during the full year 2018, up 4% compared to US\$1,952 million recorded in 2017, mainly reflecting higher sales volumes in our Cajamarquilla and Três Marias smelters.

Cost of sales decreased by 13.1% in 4Q18, totaling US\$436 million compared to US\$501 million in 4Q17. The main drivers for the decrease in costs were: (i) lower zinc LME prices in 4Q18 versus 4Q17, impacting zinc concentrate acquisitions and (ii) the depreciation of the Brazilian currency positively

⁸ For details on segment definition and accounting policy please refer to explanatory note 1 – "Information by business segment and geographic area" in our Financial Statements.

⁹ Segment consolidation available in the appendix.

lowering costs in our Brazilian smelters, which was partially offset by (iii) lower treatment charges and higher variable costs from the acquisition of calcined zinc and third-party concentrate.

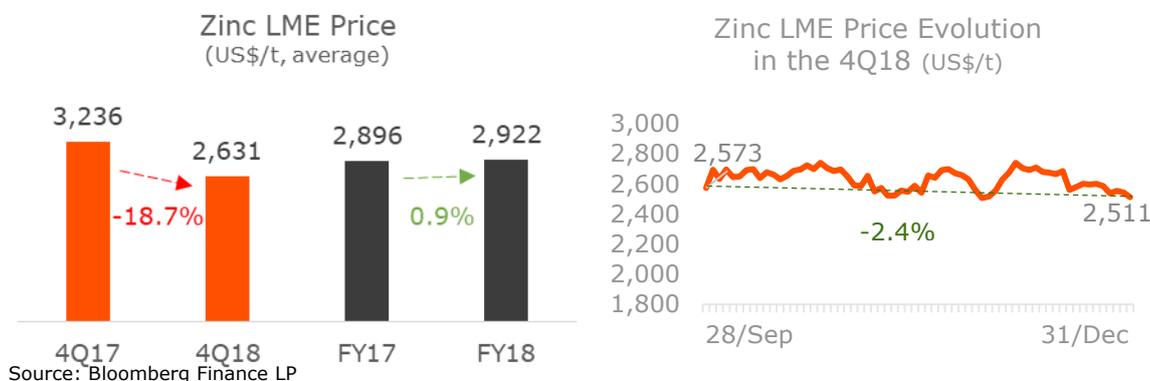
Cost of sales for the twelve months period ended December 31, 2018 totaled US\$1,876 million, up 7.4% compared to US\$1,747 million in the same period of 2017.

Adjusted EBITDA totaled US\$41 million in 4Q18, a 31%, or US\$10 million, increase when compared to the same quarter of the previous year. This increase was mainly driven by tax credits recorded in Brazil (PIS/COFINS) in 2018 which positively impacted EBITDA by US\$33 million and higher zinc metal sales volume (positive impact of US\$2 million), partially offset by lower LME prices (impact of approximately US\$19 million) Adjusted EBITDA for the full year 2018 for the smelting segment totaled US\$175 million compared to US\$153 million in the same period of 2017, a 14.4% positive variation year-over-year. The main drivers for the EBITDA increase were: (i) higher zinc metal sales volume from CJM and Três Marias (a positive impact of approximately US\$13 million) and (ii) tax credits recorded in Brazil (PIS/COFINS) in 2018 (impact of US\$33 million), partially offset by (iii) lower treatment charges.

Market Overview

Zinc 4Q18 overview

The average zinc LME price in 4Q18 was US\$2,631/t (US\$1.19/lb), 18.7% lower than the average price in the same quarter of 2017. The price at the end of December 2018 was US\$2,511/t (US\$1.14/lb), down 2.4% compared to US\$2,573/t (US\$1.17/lb) at the end of 3Q18.



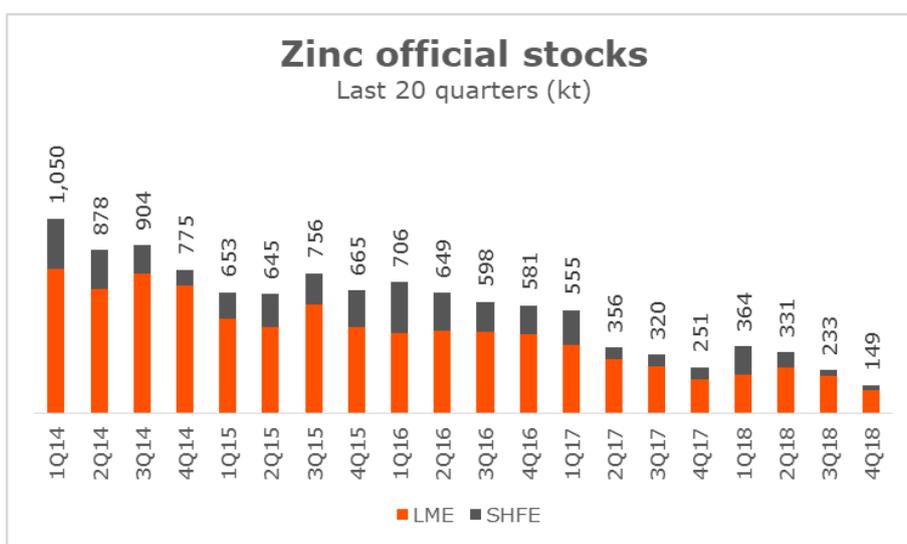
On average, 2018's LME price was only 0.9% higher than 2017. However, the market dynamics differed, as in 2017 the price had an upward trend throughout the year, as the fundamentals were growing stronger. Meanwhile in 2018, although the fundamentals also got stronger and metal stocks decreased to all-time lows, the continuous trade war between China and US negatively impacted market confidence and sentiment, consequently impacting prices.

The global zinc market has been facing deficits since 2012, which consumed the stocks and took it to critical levels in terms of days of consumption. This scenario worsened with the environmental protection regulation in China, which shut down smelter operations that were not operating in accordance with the laws. This situation should support another year of balance deficit in 2019, according to Wood Mackenzie.

Despite the deal struck during the G20 conference in December 2018 – in which the US and China agreed to halt the new trade tariffs for 90 days – the turmoil in the market continues and an agreement between the US and China is still uncertain.

According to Wood Mackenzie, the escalating trade war had little impact in zinc demand and the continued restructuring of the Chinese economy is more significant to the market, as the Asian country is changing from investment to consumption oriented.

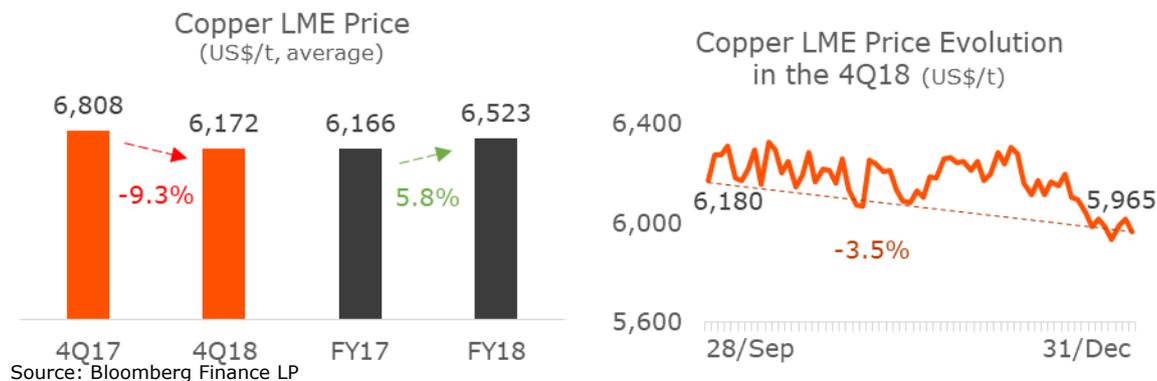
On the mine side, concentrate production should have some increase in 2019, as some operations came online in 2018 and will ramp up during the course of the year, easing the tightness in the concentrate market, although not enough to balance the market, and turning the spotlight to the metal side, as stocks continue to be in critical levels, as shown in the chart below. This market dynamic is driving the China spot treatment charge rise, which reached U\$187/t in December 2018, after a low of U\$19/t in March 2018.



Source: Bloomberg Finance LP

Copper 4Q18 overview

The average copper LME price in 4Q18 was US\$6,172/t (US\$2.80/lb), down 9.3% when compared to the same quarter of 2017. The price ended 4Q18 at US\$5,965/t (US\$2.71/lb), down 3.5% from US\$6,180/t (US\$2.80/lb) at the end of 3Q18.



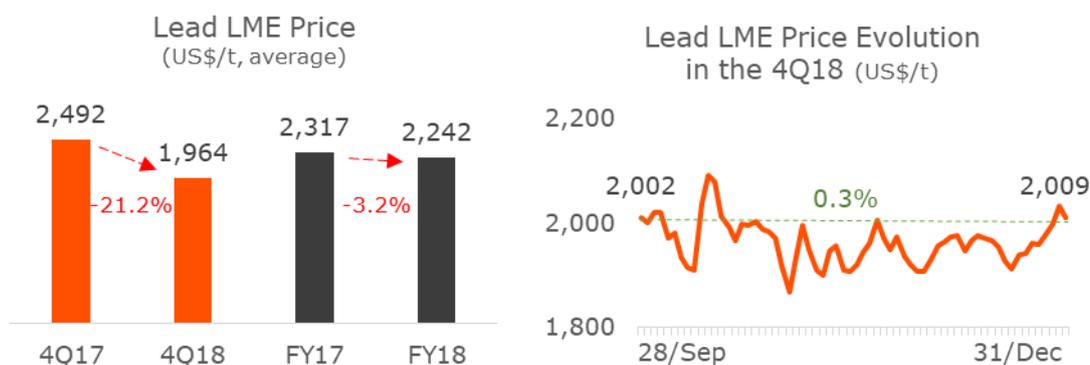
The US-China trade war had a negative impact on copper prices in 2018. In addition, the global economic outlook, the Fed's decision to lift interest rates by 0.25% in December 2018 and the US dollar appreciation also drove the copper market lower. This scenario is very different from the one observed at the end of 2017, when copper prices increased, supported by improved demand fundamentals and a re-discovered appetite for commodities amongst many investors. Even under this negative scenario at the end of the year, the average copper prices in 2018 were 5.8% higher than the average in 2017.

Demand in Southeast Asia was impacted due to falling domestic end-use, increasing direct use of scrap and flattish external demand for copper semis. Refined copper and copper semis imports fell by 3% year on year in November, the first time in 2018 that a decline in imports was recorded in China.

Although stocks on the LME decreased by approximately 70kt in 2018, copper prices finished the year 9% lower, comparing the average of 4Q18 to the average of 4Q17, given the negative macroeconomic sentiment overhanging the market fundamentals. In SFHE, copper stocks also decreased by 32kt in 2018 compared to the end of 2017.

Lead 4Q18 overview

The average lead LME price in 4Q18 was US\$1,964/t (US\$0.89/lb), 21.2% lower than the average price in 4Q17. The price ended 4Q18 at US\$2,009/t (US\$0.91/lb), stable compared to US\$2,002/t (US\$0.91/lb) at the end of 3Q18.



Source: Bloomberg Finance LP

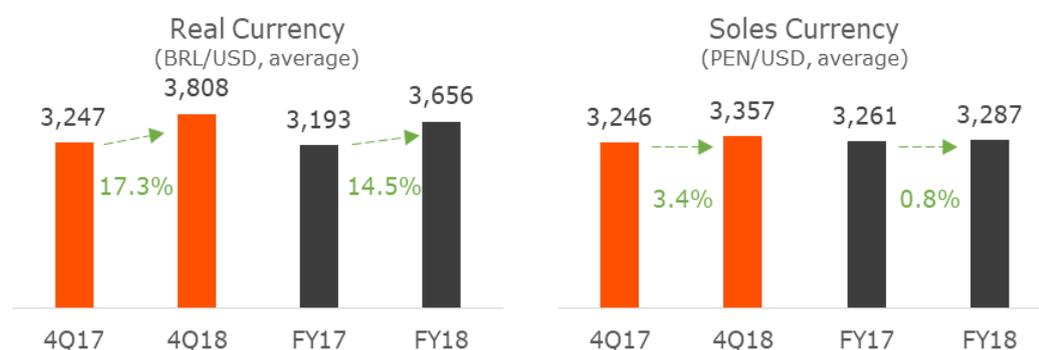
As with all the other base metals, lead prices were also impacted by the ongoing US-China trade war, although it was the least affected metal in this quarter, especially by the end of 4Q18, presenting a very subtle price variation throughout the period.

The US-China meeting over the G20 summit and the agreement on a 90-day truce resulted in more confident metal demand in general, boosting base metals prices and lowering the US dollar value. However, such effects were perceived to be temporary, which led to markets uncertainty and lingering concerns from economists. Moreover, the recent events involving the arrest of Huawei's CFO increased the fear of impacts on the fragile relationship between the world's biggest economies as well as a reduction in base metals prices, but lead price resisted the setback.

According to Wood Mackenzie, the lead concentrate market remained tight, which led to low levels of treatment charges and, although the production forecast for the concentrate is to rise next year, it should not be enough to push the TC to higher levels. Therefore, the expectations on the price increase may remain modest.

Even with slightly higher demand and stocks lower than expected, lead prices remained stable, not responding to market fundamentals.

Foreign Exchange 4Q18 overview



Source: Brazilian Central Bank

The average exchange rate for the Brazilian Real in 4Q18 was 3.808/US\$, up 17.3% year over year. Comparing 4Q18 over 3Q18, however, the Brazilian Real exchange rate appreciated 3.6%, from 3.950/US\$ in 3Q18 to 3.808 in 4Q18, mainly due to changes in the domestic political scenario. The election of the new president led to the appreciation of the Brazilian Real exchange rate, following the market support of the new government's proposed economic policies.

The average exchange rate for Peruvian soles in 4Q18 was 3.357/US\$, up 3.4% year over year, following the appreciation of the U.S. dollar against the majority of the global currencies.

Market data

	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Zinc (US\$/t)	2,631	2,537	3,236	(18.7%)	2,922	2,896	0.9%
Zinc (US\$/lb)	1.19	1.15	1.47	(18.7%)	1.33	1.31	0.9%
Copper (US\$/t)	6,172	6,105	6,808	(9.3%)	6,523	6,166	5.8%
Copper (US\$/lb)	2.80	2.77	3.09	(9.3%)	2.96	2.80	5.8%
Lead (US\$/t)	1,964	2,104	2,492	(21.2%)	2,242	2,317	(3.2%)
Lead (US\$/lb)	0.89	0.95	1.13	(21.2%)	1.02	1.05	(3.2%)
BRL/USD (Average)	3.808	3.950	3.247	17.3%	3.656	3.193	14.5%
BRL/USD (End of period)	3.875	4.004	3.308	17.1%	3.875	3.308	17.1%
PEN/USD (Average)	3.357	3.292	3.246	3.4%	3.287	3.261	0.8%
PEN/USD (End of period)	3.376	3.299	3.241	4.2%	3.376	3.241	4.2%

Source: Bloomberg

Business Performance

Mining Performance

Mining Production

Consolidated	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Treated Ore (kt)	3,435	3,321	3,351	2.5%	13,051	13,015	0.3%
Zinc grade (%)	3.39	3.13	3.50	(11 bp)	3.27	3.30	(4 bp)
Copper grade (%)	0.35	0.38	0.40	(6 bp)	0.38	0.42	(4 bp)
Lead grade (%)	0.56	0.52	0.58	(1 bp)	0.53	0.53	(0 bp)
Silver grade (oz/t)	0.93	0.95	0.96	(2.9%)	0.91	0.90	1.8%
Gold grade (oz/t)	0.005	0.006	0.005	(5.3%)	0.007	0.006	28.1%
Zn Content (kt)	103.2	90.2	102.0	1.1%	372.8	375.4	(0.7%)
Cerro Lindo	39.5	29.9	44.6	(11.4%)	130.3	155.9	(16.4%)
Vazante	35.8	34.6	34.8	2.9%	140.8	135.4	4.0%
El Porvenir	14.9	13.6	13.9	7.4%	57.9	46.2	25.4%
Atacocha	4.3	4.6	3.9	10.7%	17.3	17.0	2.2%
Morro Agudo	8.7	7.5	4.9	77.6%	26.4	21.0	25.9%
Cu Content (kt)	9.2	10.2	10.9	(15.6%)	39.0	44.2	(11.6%)
Pb Content (kt)	14.7	12.7	15.0	(2.3%)	52.3	52.6	(0.6%)
Ag Content (koz)	2,197.0	2,064.7	2,270.8	(3.3%)	7,992.2	7,945.8	0.6%
Au Content (koz)	7.6	7.1	8.0	(4.9%)	29.2	32.5	(10.2%)
Zn Eq production (kt)	150.0	136.9	153.5	(2.3%)	555.7	571.2	(2.7%)
Cerro Lindo	68	60	78	(12.7%)	245	285	(14.0%)
Vazante	37	35	35	3.4%	144	138	4.1%
El Porvenir	23	21	22	4.1%	90	75	19.7%
Atacocha	12	11	12	(2.7%)	45	47	(4.1%)
Morro Agudo	11	9	6	80.2%	31	25	23.5%

Production: Zinc equivalent production in Nexa's mining operations totaled 150.0kt in 4Q18, down 2.3% compared to 153.5kt produced in the same period of the previous year. When compared to 3Q18, there was an increase of 13.1kt of zinc equivalent production in 4Q18. Production totaled 555.7kt in 2018, down 2.7% compared to 571.2kt recorded in the same period of 2017.

Comparing 4Q18 to 4Q17, there was an increase of 2.5% (84kt) in treated ore volume offset by a decrease in copper and zinc grades (6bp and 11bp, respectively). Continuous zinc volume improvements in Morro Agudo, Atacocha, and El Porvenir (77%, 11%, and 7%, respectively) offset the decrease of 11% in Cerro Lindo production, as explained in detail in each asset section below.

Cash cost – Mining Segment

Consolidated cash cost	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Cash Cost Net of By-products in US\$/t	693.7	759.8	349.4	98.5%	625.3	520.1	20.2%
Cash Cost Net of By-products in US\$/lb	0.31	0.34	0.16	98.5%	0.28	0.24	20.2%
AISC in US\$/t	1,417.1	1,208.5	809.2	75.1%	1,096	872.7	25.6%
AISC in US\$/lb	0.64	0.55	0.37	75.1%	0.50	0.40	25.6%

(1) In accordance with the Financial Statements, we updated our AISC calculations in order to reflect G&A reclassifications to the new line labeled "Mineral exploration and project development".

Cash cost and AISC: We have updated our AISC calculations to include sustaining CAPEX as well as health, safety and environment, tailing dams and other non-expansion related CAPEX, as mentioned in 1Q18.

In 4Q18, our cash cost net of by-products credits increased by 98.5% to US\$0.31/lb (or US\$694/t) in 4Q18 compared to US\$0.16/lb (or US\$349/t) in 4Q17, mainly due to lower by-products credits (-US\$0.17/lb or US\$369/t) related to lower metal prices and lower sales in Peru and higher operating costs (+US\$0.03/lb or US\$72/t), mainly in Peru, due to higher costs of development services and materials, partially offset by devaluation of the BRL impacting our Brazilian mines (-US\$0.02/lb or US\$47/t) and lower treatment charges (-US\$0.01/lb or US\$30/t).

For the full year 2018, cash cost net of by-products totaled US\$0.28/lb (or US\$625/t), 20.2% higher when compared to US\$0.24/lb (or US\$520/t) recorded in 2017 driven by lower by-product credits (-US\$0.05/lb or US\$121/t), lower zinc production (+US\$0.02/lb or US\$51/t) and higher operating costs (+US\$0.03/lb or US\$66/t), partially offset by devaluation of BRL (-US\$0.02/lb or US\$41/t) and lower treatment charges (-US\$0.04/lb or US\$93/t).

AISC also increased in 4Q18, amounting to US\$0.64/lb (or US\$1,417/t), 75.1% higher than in 4Q17, impacted by reasons mentioned above combined with the higher CAPEX in 4Q18 when compared to 4Q17, as indicated in our annual CAPEX guidance.

For a reconciliation of AISC, refer to the appendix section "All-in Sustaining Cost – Mining".

Mining Production Volumes and Cash Costs by Assets**Cerro Lindo, Peru**

The Cerro Lindo mine is an underground mine located in Peru, which began operating in 2007, and is wholly-owned by our 80.16% owned subsidiary Nexa Peru. In July 2017, an expansion project was completed at the processing plant, increasing its capacity to 21kt of ore per day. Since then, we have been developing new stopes, which prevented the mine from operating at full capacity in 1H18. These new stopes enable us to access new production areas. Cerro Lindo's estimated proven and probable mineral reserves represent a mine life of approximately eight years, according to the latest report with updated information relating to mineral reserves and resources as of December 31, 2017, published on April 30, 2018 "2017 YE MRMR Update".

Cerro Lindo, Peru	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Treated Ore (kt)	1,834	1,733	1,876	(2.2%)	6,915	7,298	(5.2%)
Zinc grade (%)	2.35	1.93	2.57	(22 bp)	2.07	2.33	(26 bp)
Copper grade (%)	0.58	0.67	0.67	(8 bp)	0.64	0.69	(5 bp)
Lead grade (%)	0.30	0.25	0.32	(3 bp)	0.25	0.27	(2 bp)
Silver grade (oz/t)	0.72	0.78	0.73	(1.1%)	0.69	0.69	(0.4%)
Gold grade (oz/t)	0.002	0.003	0.001	65.9%	0.002	0.002	(14.3%)
Zn Content (kt)	39.5	29.9	44.6	(11.4%)	130.3	155.9	(16.4%)
Cu Content (kt)	9.0	10.1	10.8	(16.5%)	38.3	43.6	(12.0%)
Pb Content (kt)	4.1	3.0	4.8	(14.4%)	12.8	14.8	(14.0%)
Ag Content (koz)	939.8	933.9	1,023.9	(8.2%)	3,343.6	3,545.8	(5.7%)
Au Content (koz)	1.3	1.2	1.2	15.1%	4.1	4.0	2.7%
Zn Eq production (kt)	68.4	60.2	78.3	(12.7%)	245.5	285.4	(14.0%)

Production: The zinc equivalent production in Cerro Lindo was 246kt in 2018, 14% lower when compared to 285kt in 2017. The main drivers for the lower production compared to 2017 were lower treated ore as the new stopes started operation in the second half of 3Q18 and lower zinc grades, which were anticipated in the mine plan (-26 bp for zinc and -5bp for copper, when comparing 2018 to 2017). As discussed in prior quarters, an increase in mine development starting in 2Q18 was planned to sustain a higher level of production at Cerro Lindo. Mine development initiatives increased from ~2,400 meters per month at the beginning of the year to ~3,200 meters per month since 2Q18, a 33% increase, and are expected to remain around ~3,000 meters per month until 3Q19. The development of new stopes allowed us to access new production areas and accelerate production rates during 4Q18, as planned. In 4Q18, our zinc equivalent production at Cerro Lindo was 68kt, 17% higher than the average production for the first three quarters of the year, which we believe could be sustained along 2019.

A total of 12km of diamond drilling was completed in 4Q18, primarily focused on identifying and detailing new ore bodies (OB's). In addition, 12km of infill diamond drilling were completed, focused on conversion and upgrading of mineral resources.

Cerro Lindo – exploration:

During 2018, we completed a total of 57km of diamond drilling. We started drilling activities in the Orcocobre region, north of the Topara River and 2km from the current mine. By the end of 2018, we had drilled 6km in 12 diamond drill holes. So far, we have intercepted hydrothermal alteration and marginal mineralization both characteristic of a VMS system (same mineralization style as Cerro Lindo mine). We intend to drill an additional 20km of diamond drilling during 2019. Currently, all our discovered deposits are located south of the Topara River. These activities in conjunction with the infill drilling are key to sustaining and increasing our mineral inventory.

Cerro Lindo main projects:

- **Construction of the new waste disposal deposit (Botadero Pahuaypite):** The construction of the new waste disposal deposit aims to provide continuity to our Cerro Lindo unit in accordance with the mine plan. After the approval of the project by Nexa in 2Q18, the Construction License was issued by the local agencies in early July, allowing Nexa to initiate construction immediately. In 4Q18, the execution phase progressed 59%. In January 2019 the construction of the main access to the waste dump wall was finalized, allowing other works as the drainage system, to take place. The project is progressing according with the plan and NEXA estimates the start of operation of the new deposit at the end of 1Q19.
- **Replacement of the seawater pipeline from the desalination plant:** The project was approved in 2018 with an estimated CAPEX of US\$11.8 million. The purpose is to provide mine operations with a reliable water supply from the coast, by replacing the original pipeline, which has suffered from normal wear and tear after more than a decade of operation. The new pipeline will have a larger diameter to reduce the working pressure, improving the system's reliability. During 4Q18 the execution phase progressed 36%. We received all acquired pipeline material and concluded the mobilization process for the key construction contractor. Installation works will begin in 1Q19. Coordination with Peru LNG and TGP has been done for two points where the seawater pipeline crosses gas pipes from these two companies. The project is progressing according with the plan and NEXA estimates the start of operation of the new pipeline in 2Q19.

Cash cost Cerro Lindo, Peru	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Cash Cost Net of By-products in US\$/t	243.2	118.9	(430.9)	N/A	(50.4)	(188.6)	(73.3%)
Cash Cost Net of By-products in US\$/lb	0.11	0.05	(0.20)	N/A	(0.02)	(0.09)	(73.3%)

Cash cost: Cash cost net of by-products increased from a negative US\$0.20/lb (or -US\$431/t) in 4Q17 to a positive US\$0.11/lb (or US\$243/t) in 4Q18. The main reasons for this change are (i) lower by-products credits (-US\$0.16/lb or US\$360/t) due to lower metal prices and lower copper and lead grades; (ii) higher operating costs (+US\$0.08/lb or US\$183/t), mostly related to higher development costs; and (iii) lower zinc production due to lower treated ore and lower zinc grade, increasing cash cost by US\$0.07/lb (or US\$151/t).

For the full year 2018, cash cost net of by-products totaled a negative US\$0.02/lb (or negative US\$50/t) compared to a negative US\$0.09/lb (or negative US\$189/t) in 2017, mainly due to (i) higher operating costs (+US\$0.07/lb or +US\$163/t), mostly related to higher costs with development, safety standards improvements, and maintenance; and (ii) lower zinc production due to lower treated ore and lower zinc grades increasing cash cost by US\$0.10/lb (or US\$211/t), partially offset by lower TCs (-US\$0.03/lb or US\$65/t) and higher by-products credits (+US\$0.08/lb or US\$170/t) in 2018.

Vazante, Brazil

The Vazante mine is an underground mine located in the Brazilian state of Minas Gerais. The mine is wholly-owned by our Brazilian subsidiary Nexa Recursos Minerais and began operating in 1969. The current processing capacity is 4.1kt of ore per day. This mine's estimated proven and probable mineral reserves represent a mine life of approximately twelve years according to the 2017 YE MRMR Update as of December 31, 2017.

Vazante, Brazil	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Treated Ore (kt)	371	363	343	8.2%	1,374	1,321	4.0%
Zinc grade (%)	11.22	11.24	12.66	(143 bp)	12.13	12.30	(17 bp)
Lead grade (%)	0.33	0.33	0.32	1 bp	0.34	0.34	(1 bp)
Silver grade (oz/t)	0.58	0.63	0.46	25.5%	0.62	0.56	10.8%
Zn Content (kt)	35.8	34.6	34.8	2.9%	140.8	135.4	4.0%
Pb Content (kt)	0.3	0.3	0.3	29.3%	1.2	1.2	2.3%
Ag Content (koz)	108.0	105.3	82.9	30.3%	380.2	355.5	6.9%
Zn Eq production (kt)	36.6	35.4	35.4	3.4%	143.8	138.2	4.1%

Production: Zinc equivalent production in Vazante was 144kt in 2018, up 4% compared to 2017 due to a 4% increase in treated ore (1,374kt in 2018 vs. 1,321kt in 2017) which offset the lower zinc grades of 12.13% in 2018 compared to 12.30% in 2017. During 4Q18, production was up 3.4%, to 36.6kt, also reflecting an increase in treated ore. Throughout 2018, our main brownfield project was the Vazante mine deepening. The Start-up of EB140 Phase 1 is a significant milestone for the project and is planned for the beginning of 2019 which should allow us to reach new areas of the ore body.

Vazante main projects:

- **Vazante mine deepening project:** The Vazante mine deepening is our key brownfield project (expected to extend the mine life of Vazante from 2022 to 2027). We are also conducting exploration activities below the mine's current level of operation. We believe this project will maintain the Vazante mine's production at 135,000 tonnes of zinc per year until 2029, based on current levels of production and estimated reserves. In 4Q18, we reached 77% physical progress focusing on the Pumping Station EB140. The key highlights of the period were the conclusion of the excavation of the shaft, conclusion of deepening ramp 27, and the progress of electromechanical assembly of the Pumping Station Phase 1. The Start-up of EB140 Phase 1 is a significant milestone for the project and is planned for early 2019 due the impacts of rainy season at Vazante Site. Production at deeper mine levels represented more than half (73%) of Vazante's zinc production in 4Q18.
- **Dry stacking disposal:** The project consists of the installation of a new process of filtering, drying, handling and disposal of dry tailings that meets the life of mine of Vazante. The process is to remove water from the tailing pulp derived from the flotation through a dewatering plant using thickener and press filters. Dry material is transported, stacked and compacted in the final stack. This solution will substitute the current Aroeira's conventional tailings disposal. During 4Q18 we reached 89% project overall progress according with the plan. The detailed engineering was concluded and the long lead items (thickener and filter) have been delivered at site. The construction has reached 85% physical progress primarily due to the effective performance by the civil and electromechanical assembly contractor in earthworks, civil works and steel structure erection. The operation of the new dry stack is planned to start in 2Q19.

Cash cost Vazante, Brazil	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Cash Cost Net of By-products in US\$/t	826.3	867.3	850.8	(2.9%)	834.5	965.3	(13.5%)
Cash Cost Net of By-products in US\$/lb	0.37	0.39	0.39	(2.9%)	0.38	0.44	(13.5%)

Cash cost: Cash cost net of by-products decreased 2.9% when compared to 4Q17, from US\$0.39/lb (or US\$851/t) to US\$0.37/lb (or US\$826/t). The main reasons are: (i) devaluation of the BRL (-US\$0.04/lb or US\$81/t), (ii) higher by-products credits due to higher silver grades (+US\$0.01/lb or US\$14/t), partially offset by higher operating costs (+US\$0.03/lb or US\$71/t) mainly due to higher personnel costs related to an additional shift aiming at production and productivity gains, third party services and maintenance costs.

For the full year 2018, cash cost net of by-products was US\$0.38/lb (or US\$834/t), 13.5% lower compared to US\$0.44/lb (or US\$965/t) in 2017. This decrease was mainly driven by lower treatment charges (-US\$0.06/lb or US\$138/t) and devaluation of the BRL (-US\$0.03/lb or US\$67/t), partially offset by higher operating costs (+US\$0.03/lb or US\$71/t).

A total of 3km of diamond drilling was completed in Vazante in 4Q18, primarily focused on identifying and detailing new ore bodies. In addition, 21km of infill diamond drilling were completed in the quarter, focused on the conversion and upgrade of mineral resources.

El Porvenir, Peru

The El Porvenir mine is an underground mine located in Peru. The mine is wholly-owned by our subsidiary Nexa Peru and began operating in 1949. The current processing capacity is 6.5kt of ore per day. This mine's estimated proven and probable mineral reserves represent a mine life of approximately ten years, according to the 2017 YE MRMR Update as of December 31, 2017.

El Porvenir, Peru	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Treated Ore (kt)	542	534	516	5.1%	2,150	1,835	17.2%
Zinc grade (%)	3.11	2.89	3.04	7 bp	3.04	2.86	17 bp
Copper grade (%)	0.15	0.13	0.13	1 bp	0.15	0.13	2 bp
Lead grade (%)	0.97	0.98	1.07	(10 bp)	0.98	1.04	(6 bp)
Silver grade (oz/t)	2.01	1.93	2.08	(3.3%)	1.92	2.05	(6.2%)
Gold grade (oz/t)	0.015	0.016	0.018	(16.6%)	0.027	0.016	73.4%
Zn Content (kt)	14.9	13.6	13.9	7.4%	57.9	46.2	25.4%
Cu Content (kt)	0.1	0.1	0.1	58.2%	0.6	0.5	15.0%
Pb Content (kt)	4.1	4.1	4.3	(5.1%)	16.6	14.8	12.3%
Ag Content (koz)	653.5	617.6	670.9	(2.6%)	2,533.8	2,357.4	7.5%
Au Content (koz)	2.4	2.3	2.4	2.5%	9.7	8.4	14.9%
Zn Eq production (kt)	22.9	21.2	22.0	4.1%	89.7	74.9	19.7%

Production: Zinc equivalent production at El Porvenir was up 20%, totaling 90kt in 2018 compared to 75kt in 2017, mainly due to higher mining performance, resulting in a 17% increase in treated ore as well as higher zinc head grades (3.04% in 2018 vs. 2.86% in 2017). During 4Q18, zinc equivalent production was up 4% reaching 23kt also reflecting higher zinc grades and an increase in treated ore.

Regarding strategic exploration activities, 10km of diamond drilling were completed during 4Q18 and a total of 59km in the year, primarily focused on identifying new ore bodies towards the north, along the integration area between El Porvenir and Atacocha. In addition, over 7km of infill diamond drilling were completed in 4Q18, focusing on the conversion and upgrade of mineral resources.

Cash cost El Porvenir, Peru	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Cash Cost Net of By-products in US\$/t	1,214.9	1,368.6	1,183.1	2.7%	1,192.9	1,210.2	(1.4%)
Cash Cost Net of By-products in US\$/lb	0.55	0.62	0.54	2.7%	0.54	0.55	(1.4%)

Cash cost: In 4Q18, cash cost net of by-products for El Porvenir increased slightly from US\$0.54/lb (US\$1,183/t) in 4Q17 to US\$0.55/lb (US\$1,215/t) in 4Q18, mostly due to higher operating costs related to higher tons mined (+US\$0.01/lb or US\$24/t).

In the twelve-month period, cash cost also remained stable, decreasing 1.4% from US\$0.55/lb (US\$1,210/t) in 2017 to US\$0.54/lb (or US\$1,193/to) in 2018, mainly due to higher zinc production lowering unitary costs, decreasing cash cost by US\$0.08/lb (or US\$174/t) in addition to lower treatment charges (-US\$0.03/lb or US\$85/t), mostly offset by lower by-products credits (+US\$0.12/lb or US\$263/t).

Atacocha, Peru

The Atacocha mine is an underground and open pit mine located in Peru. The mine is 67% owned by Nexa Peru and began operating in 1938. The current processing capacity is 4.5kt of ore per day. This mine's estimated proven and probable mineral reserves represent a mine life of approximately twelve years estimated according to the 2017 YE MRMR Update as of December 31, 2017.

Atacocha, Peru	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Treated Ore (kt)	399	401	382	4.6%	1,551	1,507	3.0%
Zinc grade (%)	1.40	1.49	1.32	9 bp	1.43	1.43	1 bp
Copper grade (%)	0.10	0.10	0.10	0 bp	0.10	0.09	1 bp
Lead grade (%)	1.22	1.11	1.32	(10 bp)	1.18	1.22	(4 bp)
Silver grade (oz/t)	1.42	1.36	1.60	(11.6%)	1.42	1.43	(1.1%)
Gold grade (oz/t)	0.014	0.013	0.016	(12.7%)	0.015	0.019	(22.0%)
Zn Content (kt)	4.3	4.6	3.9	10.7%	17.3	17.0	2.2%
Cu Content (kt)	0.0	0.0	0.0	111.9%	0.1	0.1	25.4%
Pb Content (kt)	4.1	3.8	4.4	(6.8%)	15.6	16.0	(2.3%)
Ag Content (koz)	439.9	407.8	493.1	(10.8%)	1,678.9	1,687.0	(0.5%)
Au Content (koz)	3.8	3.6	4.4	(14.2%)	15.4	20.1	(23.2%)
Zn Eq production (kt)	11.6	11.4	11.9	(2.7%)	45.3	47.2	(4.1%)

Production: Zinc equivalent production at Atacocha dropped by 4% to 45kt in 2018, compared to 47kt in 2017. The lower zinc equivalent volume was impacted mainly by lower grades in lead (1.18% in 2018 vs. 1.22% in 2017) and lower gold production (down 23% in 2018 versus 2017), partially offset by higher zinc and copper volumes.

Regarding exploration activities, 8km of diamond drilling were completed during 4Q18 and a total of 53km in 2018, primarily focused on identifying new ore bodies, and the conversion and upgrade of mineral resources towards the southern area of the San Gerardo open pit. An additional 8km of infill diamond drilling were completed in 4Q18, for a total of 39km in 2018, focusing on the conversion and upgrade of mineral resources.

Pasco complex main projects (El Porvenir and Atacocha):

The El Porvenir and Atacocha mines that form the Pasco mining complex are currently undergoing an operational integration process. This complex integration involves shared tailings, storage facilities and shared underground infrastructure among other benefits.

- **Elevation of El Porvenir tailings dam level:** This project aims to ensure sustainability of the Atacocha and El Porvenir operations. The feasibility study (FEL3) was finished in 2Q18, comprising two new dam raises (levels 4060 and 4064), totaling CAPEX of US\$28.9 million. During 3Q18, Nexa approved the raise to level 4060, with a total initial CAPEX of US\$17.2 million. The Environmental Impact Assessment (EIA) has already been obtained. During 4Q18 we concluded the procurement process for the key construction contractor and started the civil works, accomplishing 29% of overall progress. To complement this project, the level 4064 raised and the diversion channel, are under conclusion of a final study stage (FEL 3), and will follow the internal approval process during 1H19.
- **Waste disposal:** As expected, the construction of the new waste disposal to allow the continuity of the San Gerardo's open pit mine in Atacocha was concluded in 3Q18, with a total CAPEX of US\$6.6 million, below the US\$8.4 million originally approved. The second phase is under feasibility study (FEL3) and is over 90% complete. Construction of the second phase is expected to be approved in 1H19 and completed by 2Q20, due to modifications in the mining plan and license requirements, without any impact to Atacocha's plant operation.

Cash cost Atacocha, Peru	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Cash Cost Net of By-products in US\$/t	1,837.7	940.1	(563.3)	N/A	1,115.5	(191.1)	N/A
Cash Cost Net of By-products in US\$/lb	0.83	0.43	(0.26)	N/A	0.51	(0.09)	N/A

Cash cost: Atacocha cash cost net of by-products increased from negative US\$0.26/lb (-US\$563/t) to a positive US\$0.83/lb (US\$1.838/t) compared to 4Q17. Cash Cost was impacted mostly by lower by-product credits (-US\$1.46/lb or US\$3,221/t), as a result of lower prices and sales, in addition to lower lead, silver and gold grades. This impact was partially offset by lower operating costs (-US\$0.30/lb or US\$673/t).

For 2018, operating costs were stable with the increase from negative US\$0.09/lb (or US\$191/t) in 2017 to positive US\$0.51/lb (or US\$1,115/t) in 2018 being mainly driven by lower by-products credits (-US\$0.57/lb or US\$1,261/t) from lower sales and lower metal prices.

Morro Agudo, Brazil

The Morro Agudo complex, located in the Brazilian state of Minas Gerais, includes an underground and an open pit mine. The complex is wholly-owned by our subsidiary Nexa Recursos Minerais and began operating in 1988. The current processing capacity is 3.4kt of ore per day. As of June 30, 2017, the mine's estimated mineral resources presented a potential mine life of approximately 11 years estimated in a preliminary economic assessment level of study.

Morro Agudo, Brazil	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Treated Ore (kt)	289	291	236	22.6%	1,061	1,055	0.6%
Zinc grade (%)	3.22	2.84	2.22	100 bp	2.70	2.18	52 bp
Lead grade (%)	0.86	0.71	0.67	19 bp	0.71	0.69	2 bp
Zn Content (kt)	8.7	7.5	4.9	77.6%	26.4	21.0	25.9%
Pb Content (kt)	2.1	1.5	1.3	62.1%	6.1	5.8	5.0%
Ag Content (koz)	55.7	0.0	N/A	N/A	55.7	N/A	N/A
Zn Eq production (kt)¹	10.5	8.7	5.8	80.2%	31.4	25.4	23.5%

Production: Zinc equivalent production at Morro Agudo reached 31kt in 2018, 23% higher than 2017, driven mainly by higher zinc grades (2.70% in 2018 versus 2.18% in 2017), a slight 0.6% increase in treated ore volume, and the ramp up of the Ambrosia trend. 4Q18 production was up 77%, driven by a 23% increase in treated ore volume and an increase in zinc grades (from 2.22% to 3.22% in 4Q17 and 4Q18, respectively).

Cash cost Morro Agudo, Brazil	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Cash Cost Net of By-products in US\$/t	1,039.4	1,134.9	1,887.2	(44.9%)	1,363.8	1,644.3	(17.1%)
Cash Cost Net of By-products in US\$/lb	0.47	0.51	0.86	(44.9%)	0.62	0.75	(17.1%)

Cash cost: Morro Agudo cash cost net of by-products decreased to US\$0.47/lb (US\$1,039/t) in 4Q18 from US\$0.86/lb (US\$1,887/t) in the 4Q17, a 44.9% reduction in the period, mostly impacted by (i) higher zinc production due to higher treated ore (+22.6%) and higher zinc grades (+100bp) decreasing cash cost by -US\$0.24/lb (or -US\$528/t). and (ii) the Brazilian Real devaluation (-US\$0.18/lb or US\$407/t). In the twelve-month period cash cost amounted to US\$0.62/lb (or US\$1,364/t), 17.1% lower compared to US\$0.75/lb (or US\$1,644/t) in 2017. This decrease was mainly driven by higher zinc production (-US\$0.19/lb or US\$417/t) and Brazilian Real devaluation (-US\$0.14/lb or US\$301/t), partially offset by higher operating costs (-US\$0.15/lb or US\$327/t).

A total of 6km of diamond drilling was completed in Morro Agudo in 4Q18, primarily focused on identifying and detailing new ore bodies. In addition, 5km of infill diamond drilling were completed, focused on the conversion and upgrade of mineral resources.

Smelting Performance

Sales volume and cash cost

Consolidated	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Metallic zinc Sales (kt)	148.5	149.7	145.3	2.2%	578.7	555.4	4.2%
Global Recovery	93.6%	93.7%	95.0%	(138 bp)	93.7%	94.6%	(85 bp)
Zinc oxide Sales (kt)	9.8	10.2	9.7	1.1%	38.2	38.5	(0.8%)
Total	158.3	160.0	155.0	2.2%	616.9	593.9	3.9%

Sales: Sales of metallic zinc in 4Q18 were 2.2% higher than in 4Q17, totaling 148.5kt, supported by higher demand in the quarter. Sales also rose to 578.7kt in 2018, a 4.2% increase compared to 555.4kt in 2017, when production and sales were impacted by heavy rainfalls and floods in Peru.

Consolidated cash cost	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Cash Cost Net of By-products in US\$/t	2,420	2,453	2,947	(17.9%)	2,714	2,615	3.8%
Cash Cost Net of By-products in US\$/lb	1.10	1.11	1.34	(17.9%)	1.23	1.19	3.8%
AISC in US\$/t	2,726	2,684	3,265	(16.5%)	2,948	2,880	2.4%
AISC in US\$/lb	1.24	1.22	1.48	(16.5%)	1.34	1.31	2.4%

(1) In accordance with the Financial Statements, we updated our AISC calculations in order to reflect G&A reclassifications to the new line labeled "Mineral exploration and project development".

Cash cost: cash cost net of by-products credits decreased by 17.9% to US\$1.10/lb (or US\$2,420/t) in 4Q18 from US\$1.34/lb (or US\$2,947/t) in 4Q17, mainly due to (i) lower raw material costs driven by lower zinc market prices (-US\$0.23/lb or US\$507/t), (ii) the Brazilian Real devaluation (-US\$0.01/lb or US\$25/t), and (iii) higher credits from by-products (+US\$0.02/lb or US\$42/t), which were partially offset by lower treatment charges (+US\$0.03/lb or US\$55/t). Our cash cost net of by-products credits is measured with respect to zinc sold.

For the full year 2018 cash cost net of by-products totaled US\$1.23/lb (or US\$2,714/t), 3.8% higher than the US\$1.19/lb (or US\$2,615/t) reported in 2017, driven by increased operating costs from higher raw material costs from the slightly increase in average zinc LME price (+US\$0.04/lb or US\$83/t) and lower treatment charges (+US\$0.04/lb or US\$101/t), partially offset by higher by-product credits (+US\$0.01/lb or US\$19/t).

AISC also decreased in 4Q18, impacted by the aforementioned reasons and higher CAPEX in the period.

For a reconciliation of cash cost and AISC, please refer to the appendix section "All-in Sustaining Cost – Smelting".

Sales Volumes and Cash Cost by Assets

Cajamarquilla, Peru

The Cajamarquilla smelter, wholly-owned by Nexa, is located in Peru and began operating in 1981. It is currently the largest zinc smelter in Latin America and the seventh largest worldwide, according to Wood Mackenzie data from 2018. Cajamarquilla uses roast-leach-electrowinning technology, with a nominal production capacity of 335kt per year.

Cajamarquilla, Peru	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	2018	2017	2018 vs. 2017
Metallic zinc Sales (kt)	87.5	84.3	84.2	4.0%	332.6	312.6	6.4%
Global Recovery (%)	93.3%	93.3%	96.3%	(297 bp)	93.6%	95.5%	(173 bp)

Cajamarquilla, Peru: The Cajamarquilla smelter sold 333kt of metallic zinc in 2018, 6.4% higher than in 2017, despite lower recovery rate (93.8% in 2018 versus 95.5% in 2017). We recall that, in 2017 (specifically during the 1H17), sales had been impacted by the challenging weather conditions in Peru. Also, we note that our recovery rate suffered an atypical spike in 2017 due to a one-off specific tailing dam recovery initiative during that year. As mentioned in our guidance section, we plan to bring recovery rates at Cajamarquilla from the average ~94% up to ~97% after the Jarosite process conversion which will be implemented in 2019. 4Q18 was the strongest quarter with sales up 4.0% from 4Q17 (87.5kt and 84.2kt, respectively).

Cajamarquilla main project:

- **Conversion to Jarosite process:** The project is expected to improve the zinc recovery rate by approximately 3% at the Cajamarquilla smelter. The total CAPEX for the conversion is estimated at US\$44.9 million, and the project is expected to be completed by 3Q19. As of 4Q18, the project's execution phase has progressed 47%, primarily led by engineering and procurement activities. Other 4Q18 highlights include: (i) SNC Lavalin's conclusion of a detailed engineering plan; (ii) the construction for the critical path which is the thickeners and tanks; and (iii) the conclusion of the selection process for electromechanical contractor.

Cash cost Cajamarquilla, Peru	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Cash Cost Net of By-products in US\$/t	2,427	2,480	2,850	(14.8%)	2,725	2,609	4.5%
Cash Cost Net of By-products in US\$/lb	1.10	1.12	1.29	(14.8%)	1.24	1.18	4.5%

Cash cost: Cajamarquilla cash cost net of by-products decreased to US\$1.10/lb (US\$2,427/t) in 4Q18 from US\$1.29/lb (US\$2,850/t) in 4Q17, a 14.8% reduction compared to the same quarter of the previous year, mostly driven by lower zinc LME prices impacting raw material cost (-US\$0.25/lb or US\$550/t) and higher by-products credits (+US\$0.02/lb or US\$46/t), partially offset by lower treatment charges (+US\$0.03/lb or US\$72/t).

For full year 2018, cash cost net of by-products totaled US\$1.24/lb (or US\$2,725/t), 4.5% higher than US\$1.18/lb (or US\$2,609/t) in 2017, driven by higher raw material costs impacted by a slightly higher average zinc LME (+US\$0.03/lb or US\$59/t) and lower treatment charges (+US\$0.05/lb or US\$101/t) in the year.

Três Marias, Brazil

The Três Marias smelter, wholly-owned by our subsidiary Nexa Recursos Minerais, is located in the Brazilian state of Minas Gerais and began operating in 1969. Três Marias processes zinc silicate concentrate from Nexa's Vazante mine and zinc sulfide concentrate from Nexa's Morro Agudo mine and uses roast-leach-electrowinning technology, with a nominal production capacity of 190kt per year.

Três Marias, Brazil	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Metallic zinc Sales (kt)	40.8	44.5	42.0	(3.0%)	167.4	161.0	4.0%
Global Recovery	93.2%	94.0%	94.7%	(148 bp)	93.7%	94.7%	(96 bp)
Zinc oxide Sales (kt)	9.8	10.2	9.7	1.1%	38.2	38.5	(0.8%)
Total	50.6	54.7	51.7	(2.2%)	205.6	199.5	3.1%

Três Marias, Brazil: The Três Marias smelter sold 167kt of metallic zinc in 2018, 4% higher than in 2017. We note that the truck drivers' strike which occurred in Brazil earlier in 2018 did not have a material impact on sales performance for the full year as we were able to act efficiently in terms of inventory and logistics management. Recovery rate was lower in 2018 versus 2017, as we took short-term measures to adjust the filtration system in our silicate circuit, an initiative which we expect to be concluded in early 2019. Sales in 4Q18 totaled 40.8kt, 3.0% lower than the 42.0kt in 4Q17 mainly due to lower recovery rate (93.7% vs 94.7%, respectively).

Três Marias main project:

- **Murici tailings complex:** The project consists of the construction of a new tailings deposit divided into four phases: Central Module, East Module, West 1 Module and West 2 Module. These deposits have a capacity to receive 17 million m3 of tailings. The Central, East, and West 2 modules have already been completed. During 4Q18, the West 2 dam and West 1 Module were granted the Operating License permit. We will conclude the last phase of the Murici project (West 1 Module) in 2020.

Cash cost Três Marias, Brazil	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Cash Cost Net of By-products in US\$/t	2,617	2,439	3,089	(15.3%)	2,785	2,591	7.5%
Cash Cost Net of By-products in US\$/lb	1.19	1.11	1.40	(15.3%)	1.26	1.18	7.5%

Cash cost: Cash cost net of by-products at Três Marias decreased 15.3% from US\$1.40/lb (US\$3,089/t) in 4Q17 to US\$1.19/lb (US\$2,617/t) in 4Q18, mostly driven by lower zinc market prices impacting raw material costs (-US\$0.21/lb or US\$474/t) and the Brazilian currency devaluation (-US\$0.02/lb or US\$42/t), partially offset by lower treatment charges (-US\$0.02/lb or US\$42/t).

During 2018, cash cost net of by-products totaled US\$1.26/lb (or US\$2,785/t), 7.5% higher than US\$1.18/lb (or US\$2,591/t) reported in 2017, driven by higher raw material costs impacted by a slightly higher average zinc LME (+US\$0.03/lb or US\$65/t) and lower treatment charges (+US\$0.05/lb or US\$104/t) in 2018.

Juiz de Fora, Brazil

The Juiz de Fora smelter, wholly-owned by our subsidiary Nexa Recursos Minerais, is located in the Brazilian state of Minas Gerais and began operating in 1980. This smelter uses roast-leach-electrowinning and Waelz Furnace technologies, with a nominal production capacity of 89kt per year.

Juiz de Fora, Brazil	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	2018	2017	2018 vs. 2017
Metallic zinc Sales (kt)	20.2	21.0	19.1	5.9%	78.7	81.8	(3.8%)
Global Recovery	95.3%	94.9%	90.4%	490 bp	93.3%	91.0%	250 bp

Juiz de Fora, Brazil: The Juiz de Fora smelter sold 79kt in 2018, 4% lower than the previous year, despite the higher global recovery.

Cash cost Juiz de Fora, Brazil	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Cash Cost Net of By-products in US\$/t	2,419	2,368	2,549	(5.1%)	2,643	2,468	7.1%
Cash Cost Net of By-products in US\$/lb	1.10	1.07	1.16	(5.1%)	1.20	1.12	7.1%

Cash cost: 4Q18 cash cost net of by-products for Juiz de Fora of US\$1.10/lb (US\$2,419/t) decreased by 5.1% compared to 4Q17, mainly due to lower zinc market prices impacting raw material cost (-US\$0.18/lb or US\$399/t) and the Brazilian currency devaluation (-US\$0.04/lb or US\$90/t), partially offset by lower treatment charges (+US\$0.01/lb or US\$17/t), higher inputs/materials costs (+US\$0.07/lb or US\$ 160/t) and increased fixed costs (+US\$0.01/lb or US 25/t).

During 2018, cash cost net of by-products totaled US\$1.20/lb (or US\$2,643/t), 7.1% higher than US\$1.12/lb (or US\$2,468/t) reported in 2017, driven by higher raw material costs impacted by a slightly higher average zinc LME (+US\$0.11/lb or US\$234/t) and lower treatment charges in the period (+US\$0.04/lb or US\$95/t), partially offset by higher by-products credits (+US\$0.03/lb or US\$66/t).

CAPEX



US\$ million	4Q18	3Q18	2Q18	1Q18	4Q17	2018	2017
Mining	76.8	39.6	35.2	20.0	29.6	171.7	107.1
Cerro Lindo	19.4	4.5	1.6	0.5	2.7	26.0	7.5
El Porvenir	11.6	5.8	3.6	4.7	2.6	25.6	19.9
Atacocha	5.2	2.8	6.8	2.1	3.1	16.9	5.9
Vazante	34.7	22.7	21.2	11.2	18.4	89.9	55.3
Morro Agudo	6.0	3.8	1.9	1.6	2.7	13.3	18.6
Smelting	40.6	23.3	19.1	10.1	21.4	93.0	81.0
CJM	20.2	9.0	2.3	2.2	3.3	33.7	20.0
Três Marias	11.3	8.9	12.8	5.7	12.9	38.7	43.5
Juiz de Fora	9.1	5.4	4.0	2.1	5.3	20.6	17.5
Other	19.7	8.3	4.1	2.9	15.9	35.0	9.5
Expansion	42.2	19.4	19.2	9.6	13.0	90.5	48.8
Non-Expansion	94.8	51.8	39.3	23.3	53.9	209.2	148.8
Total	137.0	71.2	58.5	33.0	66.9	299.7	197.6

US\$ million	4Q18	3Q18	2Q18	1Q18	4Q17	2018	2017
Modernization	9.6	3.7	0.7	1.0	5.9	15.0	21.4
Sustaining	46.4	19.6	14.9	9.4	16.5	90.2	59.4
HSE	34.3	23.0	20.5	11.2	16.2	89.1	62.1
Other	4.5	5.6	3.1	1.7	15.4	14.9	5.9
Non-Expansion	94.8	51.8	39.3	23.3	53.9	209.2	148.8

Total CAPEX amounted to US\$137 million in 4Q18 and US\$300 million for FY2018, mainly consisting expenditures to deepen the Vazante mine and the implementation of dry stack tailings also at Vazante. The CAPEX was US\$40 million above our 2018 guidance of US\$260 million, as we expedited some investments at the end of the year (~US\$8 million related to Magistral and ~US\$7 million related to Vazante), we also recorded a US\$14 million of operating expenses related to the Atacocha and El Porvenir integration which were reclassified as CAPEX and also incurred higher sustaining CAPEX in Cerro Lindo due to mine development initiatives.

The main projects in respect of which CAPEX was incurred in 2018 are listed below:

- Vazante's life of mine extension (US\$47 million);
- Implementation of dry stack tailings at Vazante (US\$20 million);
- FEL3 and commencement of execution of Aripuanã project in Brazil (US\$19 million) which was approved in October 2018; and

- Process conversion at the Cajamarquilla Smelter from the Goethite process to the Jarosite process (US\$14 million) which is expected to increase zinc recovery at the plant.

Other brownfield mining projects, including the development of the Ambrosia trend at the Company's Morro Agudo mine, are also covered in expansion CAPEX. Expenditures in early-stage mining projects are considered expenses in operating results (see "Operational Results – Mineral exploration and Project development") and totaled US\$46 million in 4Q18 and US\$126 million in 2018.

Non-expansion projects accounted for 69% of the total CAPEX in 4Q18 and 70% in 2018. The main non-expansion projects are related to environmental, health and safety investments, sustaining and investments in tailings dams.

Greenfields

In addition to our mines and smelters, we hold interests in five more advanced greenfield mining projects in Peru (Shalipayco, Magistral, Hilarión, Pukaqaqa and Florida Canyon Zinc) and two in Brazil (Aripuanã and Caçapava do Sul) at various stages of development.

Aripuanã

After the conclusion of the feasibility study and detailed analysis by the Company's management, the Board of Directors approved the construction of the Aripuanã project in October 2018. The Company filed a technical report (the "Aripuanã Technical Report") that summarizes the results of the feasibility study, including first-time public disclosure of mineral reserves estimates calculated in accordance with NI 43-101. The Installation License ("LI") was granted on December 20, 2018, which allows the Company to proceed with construction.

We expect to invest 35% (~US\$140 million) of the total estimated CAPEX of US\$392 million for the project in 2019 and 49% in 2020 with residual investments to be made during the start of production in 2021. Nexa owns a 70% stake in the Aripuanã project and is currently fully funding the development of the Aripuanã project. Mineração Rio Aripuanã Ltda. (a subsidiary of Karmin Exploration Inc. that holds the remaining 30%) is not required to contribute financially to the project until one year after the completion of the feasibility study.

The Aripuanã zinc polymetallic deposits are typical Volcanogenic Massive Sulphide (VMS) deposits. According to the Aripuanã Technical Report and based on current mineral reserves, the project has an estimated net present value (NPV) of US\$129 million (at a discount rate of 9%), internal rate of return (IRR) of 15.8% (both in real terms), assuming an average BRL/USD FX rate of 3.90, consensus long-term metal prices¹ and a life of mine of 13 years based on proven and probable mineral reserves estimate of 26.2 million tonnes. The IRR and NPV mentioned above consider the after taxes return at the project level.

Management believes there is excellent potential to extend mine life by up to six years at higher grades, based on the significant current inferred mineral resources estimate of 23.1 million tonnes and Nexa's good track record of conversion of inferred resources.

Aripuanã will use dry stacking method to deal with tailings. This method improves safety as it diminishes the tangible risk of environmental disaster.

Please visit <http://ir.nexaresources.com/regulatoryfilings> → others for Press Releases on the Aripuanã project and related Aripuanã Technical Report including the NI 43-101 mineral reserves and resources estimates as of July 31, 2018.

Shalipayco

We have determined to move forward with the pre-feasibility study for the Shalipayco project. We are focusing on the opportunity to expand the project, maximizing the project's internal rate of return and net present value. As a result, an additional infill drilling to reclassify the project's mineral resources and a beneficiation plant at Shalipayco were included in the project plan. Resulting in an additional 10-months being added to the project's master schedule. During 2019 a hydrological campaign will be started based on an environmental impact assessment, or EIA, in order to advance the development of the pre-feasibility study.

Magistral

The Magistral project has evolved very well during 2018. A drilling campaign to collect samples was completed in June 2018 and most of the metallurgical testwork was concluded in 4Q18. Several pre-feasibility study trade-offs were analyzed by Ausenco during 2Q18, including the assessment of the potential for a future underground mine and a tailings dam solution. We are focusing on the opportunity to expand the project, maximizing the project's internal rate of return and net present value. The Peruvian government also issued permits for pre-feasibility study-level drilling. As a result of improvements on plant infrastructure location and mainly due to the tailings dam solution studied during the pre-feasibility study, we expect project start up to take place in 4Q23. We expected the pre-feasibility study to be concluded in 2Q19.

Pukaqaqa

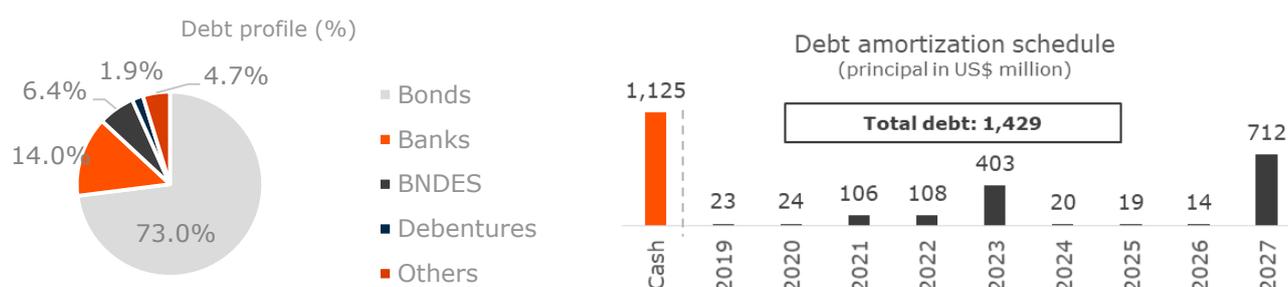
During Q4 2018, we completed the tailings storage facility design and also concluded a drilling campaign. Boreholes for metallurgy testwork were prioritized and samples have been characterized, selected and sent for metallurgical testwork. We expect to finalize the pre-feasibility study in 2019.

Florida Canyon, Peru

In November 2018, we commenced drilling with two core rigs at our Florida Canyon zinc project in northern Peru. The first drilling phase ended in late December and we plan to resume after the rainy season (circa April 2019). The program consists of drilling 41 core holes totaling approximately 17km designed to test highly prospective resource expansion opportunities identified by deposit modeling during preparation of the 2017 Florida Canyon pre economic assessment (PEA). We have completed four holes, totalling 2km and plan on accelerate drilling to complete the remaining 37 holes post-rainy season. The Florida Canyon Project is held in a joint venture in which Nexa Peru owns 61% and is the manager of the project.

Liquidity, Indebtedness and Rating

As of December 31, 2018, total gross debt was US\$1,429 million (principal only), mainly composed of (i) unsecured bonds issued by Nexa and its subsidiary Nexa Peru (former Milpo), totaling US\$700 million due in 2027 and US\$343 million due in 2023, (73% of the total debt), (ii) debt with banks (14% of the total debt, or US\$200 million), (iii) BNDES – Brazilian Development Bank – loans in Brazil (6.4% of the total debt, or US\$90.9 million); and (iv) other debts (6.6% of total debt, or US\$95 million). Only 1.6% (US\$23 million) of the total debt matures in 2019 and 18% (US\$261 million) matures between 2019 and 2022, while 51% of total debt matures after 2026.



As of December 31, 2018, the average maturity of the total debt was 6.1 years at an average interest cost of 4.8% per year, particularly due to the impact of a ten-year unsecured bond of US\$700 million issued on May 4, 2017, with an interest rate of 5.375% per year.

Debt type	Principal	%
Bonds	1,043.0	73.0%
Banks	200.0	14.0%
BNDES	90.9	6.4%
Debentures	27.7	1.9%
Others	67.3	4.7%
Total	1,428.9	100.0%

In terms of currency, US\$1,305 million (or 91.3% of total indebtedness) is denominated in U.S. dollars and US\$124 million (or 8.7% of total indebtedness) is denominated in Brazilian Reais. Only 14% of our cash balance is denominated in Brazilian Reais.

On December 31, 2018, Nexa reported a cash balance of US\$1,125 million considering cash and cash equivalent plus financial investments, and net debt of US\$303 million¹⁰, resulting in a 0.50x net debt/adjusted EBITDA ratio when considering the last twelve months adjusted EBITDA of US\$604.8 million, as described below.

US\$ million	Dec 31, 2018	Sep 30, 2018	Jun 30, 2018	Mar 31, 2018	Dec 31, 2017
Net Debt	302.7	221.6	260.8	261.4	225.0
LTM Adj. EBITDA	604.8	696.4	737.9	713.5	667.5
Net D./Adj. EBITDA	0.50x	0.32x	0.35x	0.37x	0.34x

¹⁰ Including interest accrual and costs, according to the Company's covenants criteria.

Sources of funds

Our main sources of funds are cash flows from operations, available cash and cash equivalents and financial investment balances, long-term borrowings from banks including the Brazilian Development Bank (BNDES - Banco Nacional de Desenvolvimento Econômico e Social), and issuance of debt securities in the international capital markets, and/or alternative sources of financing such as streams and the equity offering completed in October 2017. The amount of cash flows from operations is or may be also impacted by working capital requirements, share premium reimbursements, dividends, share repurchases and investment activities, in addition to servicing our indebtedness.

Cash Flows

The table below details our cash flows from operating activities, investing activities and financing activities for the three-month and twelve-month periods ended December 31, 2018 and 2017. Cash and cash equivalent position of US\$1,033 million at the end of 4Q18 does not include financial investments amounting to US\$92 million.

US\$ million	4Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Net cash flows provided by (used in):						
Operating activities	124.5	63.1	97.3%	347.6	378.9	(8.3%)
Investing activities	(106.6)	(118.1)	(9.7%)	(158.1)	(328.4)	(51.9%)
Financing activities	(85.0)	163.4	N/A	(177.4)	52.8	N/A
Increase (decrease) in cash and cash eq.	(65.2)	108.4	N/A	13.9	103.5	(86.6%)
Cash and cash eq. at the beginning of the period	1,098	911	20.6%	1,019	916	11.3%
Cash and cash eq. at the end of the period	1,033	1,019	1.4%	1,033	1,019	1.4%

In 4Q18, we generated US\$124 million in net cash flows provided by operating activities while during the full year 2018 we generated US\$348 million in net cash from operations. The lower cash generated from operations in 2018 was mainly driven by a decline in gross profits.

We used US\$107 million of net cash flows for investing activities in 4Q18, and we used US\$158 million during the full year 2018 mainly due to CAPEX along the year. We used US\$140 million from our financial investments to fund part of the CAPEX.

Net cash flows from financing activities during 4Q18 was US\$107 million. During the full year 2018, we used US\$177 million in net cash from financing activities, including the US\$80 million share premium payment made in March 2018 to our shareholders.

Credit Rating

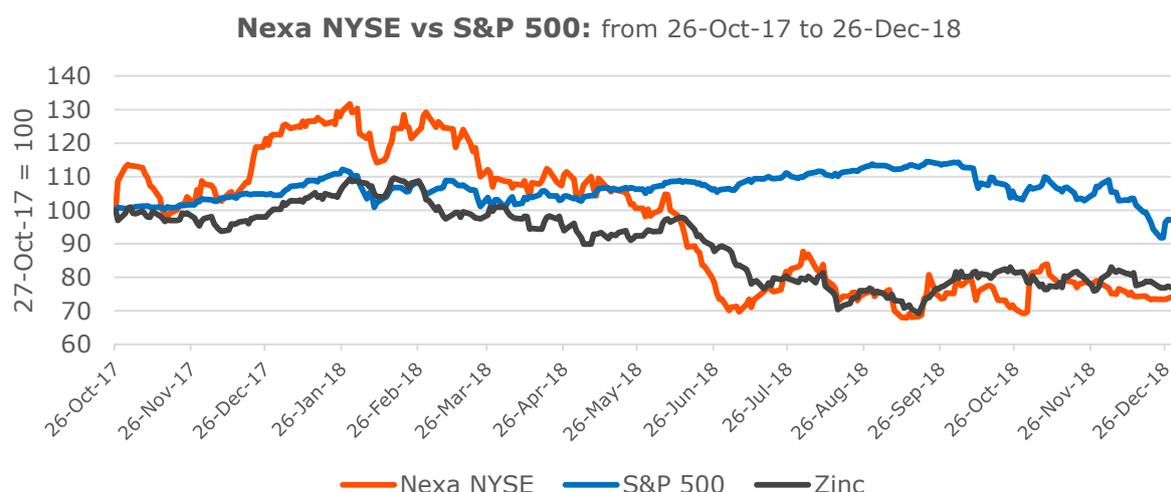
Nexa's credit is rated by the three major rating agencies, as shown in the table below:

- **S&P:** In January 2018, S&P reaffirmed our credit rating at BB+ stable.
- **Moody's:** In April 2018, Moody's reaffirmed our credit rating as Ba2 with stable outlook.
- **Fitch:** Our stable rating was reaffirmed by Fitch in November 2018

Agency	Rating	Outlook	Last update
	BB+	Stable	January 2018
	Ba2	Stable	April 2018
	BBB-	Stable	November 2018

Stock Performance

Nexa, with a free float¹¹ of 35.70% as of December 31, 2018, has been listed on both the NYSE and the TSX under the ticker symbol "NEXA" since October 26, 2017.



On December 31, 2018, Nexa's share price closed at US\$11.90 on the NYSE and C\$15.63 on the TSX. Since the IPO, our share price has decreased by 25.6% through December 31, 2018 (considering the prices on the NYSE only) while LME zinc price has decreased 23.9% in the same period, closing December 31, 2018 at US\$2,511/t. The average price in this period was US\$15.36 and the daily average volume, excluding the day of the IPO was US\$3.67 million. At the end of 2018, we had 133,208,125 common shares outstanding after the stock repurchase already mentioned.

Date	Nexa NYSE	Zinc LME	S&P 500
26-Oct-17	16.00	3,301	2,560
31-Dec-18	11.90	2,511	2,507
AVG Price	15.36	3,336	2,726
26-Oct vs. 31-Dec	-25.6%	-23.9%	-2.1%

¹¹ Free float is being considered as total shares less Votorantim SA's holdings of 64.25%

Capital Resources

Overview

In the ordinary course of business, our main funding requirements are for working capital, capital expenditures relating to sustaining and expansion investments, servicing our indebtedness and distributions to our shareholders. We typically meet these requirements through operational cash flow, available cash balance, long-term borrowings from banks and the Brazilian Economic and Social Development Bank (Banco Nacional de Desenvolvimento Econômico e Social), issuance of debt securities in the international capital markets and/or alternative sources of financing such as streaming transactions.

We believe that our current cash and cash equivalents, financial investments, cash flow from operations and available borrowings will be sufficient to meet our CAPEX and liquidity needs, based on our current requirements. We may require additional capital to meet our longer-term liquidity and future growth. Although we believe that our sources of liquidity are adequate, weaker economic conditions around the world could materially adversely affect commodities prices and, therefore, our business and liquidity.

Use of funds

As of December 31, 2018, our consolidated cash, cash equivalents and financial investments totaled US\$1,125 million. In 4Q18, we used cash flows generated by our operations primarily for investment activities.

On September 20, 2018, Nexa's Board of Directors approved a share buyback program, under which the Company, directly or indirectly through its subsidiaries, may repurchase, from time to time, up to US\$30 million of its outstanding common shares, over the 12-month period beginning on November 6, 2018 and ending on November 6, 2019. During 4Q18, we repurchased 112,388 common shares, at an average price of US\$12.00 per share, for an aggregate purchase price of US\$1.350 million.

Related Party Transactions

On September 2018, the Brazilian Electricity Regulatory Agency consented to the transfer of certain energy assets owned by Nexa Recursos Minerais S.A. to Pollarix S.A., a subsidiary of the Company. In accordance with the agreement between Nexa Brazil and Votorantim S.A. ("VSA"), after regulatory approval, Nexa Brazil was required to settle a prior obligation of US\$88 million (R\$290 million) with VSA related to the rights to use these assets (as previously disclosed). In December 2018, Nexa Brazil paid this amount. Please refer to note 12 of our Financial Statements for further details.

Financial Instruments and Derivatives

We hold several financial instruments and derivatives that are recognized and measured at fair value with gains and losses in each period included in the statement of income or in the statement of comprehensive income as appropriate. The most significant of these instruments are marketable securities, metal-related derivative contracts and factoring transactions, among others. All of these are subject to varying rates of taxation depending on their nature and jurisdiction.

Risk Management

Risk management is considered one of the key points in our business strategy and contributes to value creation and increasing the level of confidence in the Company by its main stakeholders, including shareholders, employees, customers, suppliers and the local communities.

This topic resulted in the implementation of the Enterprise Risk Management (ERM) Policy, that describes Nexa's Risk Management Model, and its activities are an integral part of the processes in our operational units, corporate departments and projects, and provides support for decision-making by our Executive Officers and Board of Directors.

The risk assessment cycle is performed annually focusing on our strategy, operational aspects and key projects. All material risks identified are assessed with consideration of the potential health, safety, environmental, social, reputational, legal and financial impacts. By embedding risk management into our work processes and critical business systems, we ensure we make decisions based on relevant inputs and valid data. All material risks identified during the risk management process are monitored and reported to the Executive Team, Audit Committee and Board of Directors.

Below there is a list of certain risk factors related to our business and industry, which form part of the risks and uncertainties Nexa may face. This is not an exhaustive list of risks and uncertainties that may impair our business operations.

- International market prices of the metals produced by Nexa, which are both cyclical and volatile
- Changes in the demand for the metals produced by Nexa
- Disruption in zinc concentrate supply
- Currency exchange rate fluctuations
- Interest rate fluctuations
- Changes in estimates of mineral reserves and resources
- Failure of tailings dams
- Natural disasters, such as floods, mudslides and earthquakes
- Relations and agreements with local communities related to our plants and projects
- Challenges relating to slope and stability of underground openings
- Increase of projects costs or delays that prevent their successful implementation

For a broader discussion of risks please refer to our annual report on form 20-F filed with the SEC (www.sec.gov), on SEDAR (www.sedar.com) and available on the Company's website (www.nexaresources.com).

Market Risk

The purpose of the market risk management process is to protect the Company's cash flow against adverse events, such as fluctuations in exchange rates, commodity prices and interest rates.

Foreign exchange risk is managed using the Company's Financial Risk Management Policy, which states that the objectives of derivative transactions are to reduce cash flow volatility, hedge against foreign exchange exposure and minimize currency mismatches. The Company monitors its foreign exchange exposure on a monthly basis.

Additionally, the policy establishes guidelines to mitigate the risk of fluctuations in commodity prices that could affect the cash flow of the Company's operating subsidiaries. The exposure to the price of each commodity considers the monthly projections of production, purchases of inputs and the maturity flows of hedges associated with them.

Hedge transactions are classified into the following categories:

(i.1) Hedges for "operating margin" (Strategic Hedge) - derivatives contracted to reduce the volatility of the cash flow from its zinc, copper and silver operations with a view to ensuring a stable operating margin for a portion of the production of metals. As of December 31, 2018 there were no Strategic Hedge open positions.

(i.2) Hedges for mismatches of "quotation periods" (Book Hedge) - hedges that set prices for the different "quotation periods" between the purchases of certain inputs (metal concentrate) and the sale of products arising from the processing of these inputs, or different "quotation periods" between the purchase and the sale of the same product. These operations usually relate to purchases and sales of zinc and silver for future settlement, and are contracted on the over-the-counter market.

(i.3) Fixed price commercial transactions (Customer Hedge) - hedging transaction that converts sales at fixed prices to floating prices in commercial transactions with customers interested in purchasing products at fixed prices. The purpose of this strategy is to maintain the revenue flow of the business unit with prices linked to the LME prices. These operations usually relate to sales of zinc for future settlement and are contracted on the over-the-counter market.

Nexa may also enter into derivative transactions to hedge different market risks, such as interest rates and currency exchange rates whenever adequate and upon approval of the Board of Directors.

Critical Accounting Policies and Estimates

In preparing consolidated financial statements, management makes estimates that affect the reported amounts of assets, liabilities, revenue and expenses across all reportable segments.

Management makes estimates that are believed to be reasonable under the circumstances. Management estimates are based on historical experience and other factors we consider to be reasonable, including expectations of future events. Critical accounting estimates are those that could affect the consolidated interim financial statements materially, are highly uncertain and where changes are reasonably likely to occur from period to period. For more details on the basis of preparation and presentation of the consolidated financial statements please refer to notes 2 of the consolidated financial statements at and for the twelve-month periods ended December 31, 2018 and note 2 of the consolidated financial statements at December 31, 2017.

Changes in accounting policies and disclosures resulting from the adoption of new accounting standards, amendments to IFRS standards and interpretations issued by the International Accounting Standards Board that are effective for an annual period beginning on or after January 1, 2018 are:

- Adoption of IFRS 9 - "Financial instruments: Recognition and measurement"; and
- Adoption of IFRS 15 - "Revenue from contracts with customers".

For more details on the main aspects introduced by the standards and impacts of adoption please refer to note 3 of the financial statements.

Use of Non-IFRS Financial Measures

Nexa's management uses non-IFRS measures such as adjusted EBITDA, cash cost net of by-products, all-in sustaining cost, among other measures, for internal planning and performance measurement purposes. We believe these measures provide useful information about the financial performance of our operations that facilitates period-to-period comparisons on a consistent basis. Management uses adjusted EBITDA internally to evaluate our underlying operating performance for the reporting periods presented and to assist with the planning and forecasting of future operating results. Management believes that adjusted EBITDA is a useful measure of our performance because it reflects our cash generation potential from our operational activities excluding exceptional items of the period. These measures should not be considered in isolation or as a substitute for profit (loss) or operating profit, as indicators of operating performance, or as alternatives to cash flow as measures of liquidity. Additionally, our calculation of adjusted EBITDA may be different from the calculation used by other companies, including our competitors in the mining industry, so our measures may not be comparable to those of other companies.

Segment performance is measured based on adjusted EBITDA, since financial results and income taxes are managed within the corporate level and are not allocated to operating segments. In this Earnings Release, we present adjusted EBITDA, which we define as (i) net income (loss) for the period, plus (ii) share in the results of associates, plus (iii) depreciation and amortization, plus/less (iv) net financial results, plus/less (v) income tax, less (vi) gain on sale of investment (loss), plus; (vii) impairment of other assets, plus/less (viii) (reversion) impairment of property, plant, equipment. In addition, management may exclude non-cash items considered exceptional from the measurement of adjusted EBITDA.

We also present herein our net debt, which we define as (i) loans and financing (the most comparable IFRS measure), less (ii) cash and cash equivalents, less (iii) financial investments, plus or less (iv) the fair value of derivative financial instruments. Our management believes that net debt is an important figure because it indicates our ability to repay outstanding debts that become due simultaneously using available cash and highly liquid assets.

See "Cautionary Statement on Forward-Looking Statements" below.

Internal Control Over Financial Reporting

Nexa's management is responsible for establishing and maintaining adequate internal control over financial reporting. Any system of internal control over financial reporting, no matter how well designed, has inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

CAUTIONARY STATEMENT ON FORWARD-LOOKING STATEMENTS

This Earnings Release contains certain forward-looking information and forward-looking statements as defined in applicable securities laws (collectively referred to in this Earnings Release as “forward-looking statements”). All statements other than statements of historical fact are forward-looking statements. Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of NEXA to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. These forward-looking statements include estimates, forecasts, and statements as to management’s expectations with respect to the business and operations of the Company and mining production, smelting sales, CAPEX and OPEX related to exploration and project development.

Forward-looking statements are necessarily based upon a number of factors and assumptions that, while considered reasonable by management, are inherently subject to significant business, economic and competitive uncertainties and contingencies. Statements concerning future production costs or volumes are based on numerous assumptions of management regarding operating matters and on assumptions that demand for products develops as anticipated, that customers and other counterparties perform their contractual obligations, that operating and capital plans will not be disrupted by issues such as mechanical failure, unavailability of parts and supplies, labor disturbances, interruption in transportation or utilities, adverse weather conditions, and that there are no material unanticipated variations in the cost of energy or supplies.

We assume no obligation to update forward-looking statements except as required under securities laws. Further information concerning risks and uncertainties associated with these forward-looking statements and our business can be found in our public disclosures filed under our profile on SEDAR (www.sedar.com) and on EDGAR (www.sec.gov).

Technical Information

The scientific and technical information regarding Aripuanã contained in this Earnings Release was prepared in accordance with the Technical Report entitled “Technical Report on the Feasibility Study on the Aripuanã Project, State of Mato Grosso, Brazil” dated October 15, 2018, with an effective date of July 31, 2018, prepared by Jason Cox, P.Eng., Sean Horan, P.Geo., Scott Ladd, P.Eng., Avakash Patel, P.Eng. and Stephan Theben, Dipl.-Ing. of RPA Inc., each of whom are “qualified persons” as defined NI 43-101. The Technical Report has been reviewed, verified and approved by RPA, based on the requirements of NI 43-101 and has been filed with Canadian securities regulators and is available under the Company’s SEDAR profile at www.sedar.com. Such report includes relevant information regarding, among others, the effective dates and the assumptions and parameters relating to mineral reserves and resources cited in this Earnings Release, as well as information regarding data verification, exploration procedures and other matters relevant to the scientific and technical disclosure contained in this Earnings Release.

Appendix

Balance Sheet – Assets

Nexa - USD thousand	Dec 31, 2018	Dec 31, 2017
Current assets		
Cash and cash equivalents	1,032,938	1,019,037
Financial investments	91,878	206,155
Derivative financial instruments	11,205	7,483
Trade accounts receivable	173,204	182,713
Inventory	269,705	324,878
Other assets	122,857	98,641
	1,701,787	1,838,907
Non-current assets		
Financial investments	355	392
Derivative financial instruments	-	4,294
Related parties	740	738
Deferred taxes	201,154	224,513
Other assets	120,175	73,138
Investments in associates	283	309
Property, plant and equipment	1,968,451	1,996,514
Intangible assets	1,742,461	1,822,719
	4,033,619	4,122,617
Total assets	5,735,406	5,961,524

Balance Sheet – Liabilities

Nexa - USD thousand	Dec 31, 2018	Dec 31, 2017
Current liabilities		
Loans and financing	32,513	40,841
Derivative financial instruments	14,181	12,588
Trade payables	387,225	329,814
Confirming payable	70,411	111,024
Salaries and payroll charges	58,166	79,798
Dividends payable	663	4,138
Related parties	63	87,686
Provisions	20,357	14,641
Contractual liabilities	31,992	31,296
Other liabilities	41,798	56,389
	657,369	768,215
Non-current liabilities		
Loans and financing	1,392,354	1,406,458
Derivative financial instruments	41	2,449
Related parties	1,517	2,238
Provision	280,566	326,520
Deferred taxes	298,598	324,931
Contractual liabilities	167,645	190,589
Other liabilities	35,515	31,221
	2,176,236	2,284,406
Total liabilities	2,833,605	3,052,621
Shareholders' equity		
Capital	133,320	133,320
Share premium	1,043,755	1,123,755
Reserves	1,318,728	1,318,728
Retained earnings (cumulative deficit)	61,430	(11,612)
Accumulated other comprehensive loss	(79,288)	(77,356)
Shares held in treasury	(1,352)	-
Total equity attributable to owners of the parent	2,476,593	2,486,835
Non-controlling interests	425,208	422,068
Total liabilities and shareholders' equity	5,735,406	5,961,524

Cash Flow

Nexa - USD thousand	4Q18	4Q17	FY18	FY17
Cash flow from operating activities				
Income before income tax	88,476	62,323	131,899	271,459
Adjustments to reconcile income (loss) before income tax to cash				
Depreciation and amortization	61,994	70,104	267,189	270,454
Interest and foreign exchange (gain) or loss	(23,825)	(19,836)	143,199	52,287
Loss on sale of property, plant & equipment and intangible assets	(293)	(2,620)	8,616	694
Impairment (reversal) of property, plant and equipment	3,283	0	3,283	0
Changes in provisions	19,356	15,167	10,009	32,798
Tax credits	(63,615)	(53)	(63,615)	(53)
Gain on sale of investment	0	0	(348)	(4,588)
Share in the results of associates	0	(70)	0	(60)
Interest paid	(26,430)	(23,341)	(74,592)	(58,635)
Income taxes paid	(17,059)	(37,535)	(108,385)	(100,265)
Changes in current assets and liabilities	82,607	(1,053)	30,343	(85,152)
Net cash provided by operating activities	124,494	63,086	347,598	378,939
Cash flow from investing activities				
Acquisitions of property, plant and equipment and intangible assets	(137,071)	(66,826)	(299,773)	(197,638)
Changes in financial investments	30,452	(34,371)	140,402	(65,661)
Loan received from related parties	0	0	0	0
Advance paid for Pollarix acquisition	0	(22,066)	0	(81,615)
Capital reduction - related parties	0	0	0	0
Proceeds from the sale of non-current assets	0	5,172	1,268	16,542
Net cash used in investing activities	(106,619)	(118,091)	(158,103)	(328,372)
Cash flow from financing activities				
Proceeds from new loans and financing	17,449	30,036	292,901	830,598
Payments of loans and financing	(7,261)	(10,097)	(295,104)	(537,254)
Capital reduction related to Pollarix acquisition	(87,623)	0	(87,623)	(55,380)
Dividends distribution	(3,475)	(12,952)	(3,475)	(61,549)
Reimbursement of share premium	0	(150,000)	(80,000)	(430,000)
Proceeds from initial public offering, net of underwriter expenses	0	306,431	0	306,431
Issuance of new shares	0	0	0	0
Related parties	0	0	0	0
Acquisition of shares from non-controlling shareholders	0	0	0	0
Repurchase of the Company's own shares	(1,352)	0	(1,352)	0
Disbursement from equity transactions with non-controlling shareholders	(2,757)	0	(2,757)	0
Net cash provided by (used in) financing activities	(85,019)	163,418	(177,410)	52,846
Effects of exchange rates on cash and cash equivalents	1,991	(39)	1,816	48
Increase in cash and cash equivalents	(65,153)	108,374	13,901	103,461
Cash and cash equivalents at the beginning of the year	1,098,091	910,663	1,019,037	915,576
Cash and cash equivalents at the end of the year	1,032,938	1,019,037	1,032,938	1,019,037

Quarterly Results of Operations

US\$ million	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Net Revenues	549.3	555.8	625.8	703.0	676.2	636.5	595.1	583.4
Cost of Sales	(411.5)	(425.3)	(447.8)	(468.2)	(485.0)	(474.3)	(488.1)	(441.6)
SG&A	(38.1)	(37.8)	(38.3)	(40.2)	(43.3)	(43.8)	(36.6)	(35.8)
Selling	(3.3)	(4.6)	(4.3)	(5.3)	(3.6)	(5.1)	(4.2)	(6.1)
General & Adm	(34.8)	(33.2)	(34.0)	(34.9)	(39.7)	(38.7)	(32.4)	(29.8)
Mineral exploration and project development	(10.3)	(21.8)	(23.1)	(37.4)	(19.3)	(27.5)	(33.1)	(46.3)
Other Operating Results	(14.2)	(8.0)	(20.8)	(4.8)	(7.0)	3.5	16.0	5.8
Net Financial Result	4.1	(70.0)	25.7	(90.0)	(29.0)	(152.4)	(44.3)	23.1
Financial Income	10.2	10.6	4.2	4.8	8.8	27.8	7.2	41.0
Financial expenses	(22.4)	(29.0)	(29.7)	(25.1)	(29.9)	(31.6)	(29.4)	(30.8)
Foreign exchange gains (loss), net	16.3	(51.6)	51.2	(69.7)	(7.9)	(148.6)	(22.1)	12.9
Depreciation, amortization and depletion	(68.9)	(66.3)	(65.2)	(70.1)	(70.0)	67.5	(65.6)	(60.9)
Adjusted EBITDA	144.1	139.7	161.3	222.5	191.2	162.9	119.8	130.8
Adj. EBITDA Margin	26.22%	25.10%	25.80%	30.20%	28.28%	25.60%	20.13%	22.43%
Net Income	55.2	5.1	81.0	24.0	62.8	(35.3)	6.9	56.6
Attributable to Nexa shareholders	49.1	(4.1)	69.7	12.2	55.1	(40.5)	7.4	52.9
Attributable to non-controlling interests	6.1	9.2	11.3	11.8	7.6	5.1	(.4)	3.8
Number of shares (in '000)	112.821	112.821	112.821	127.527	133.320	133.320	133.320	0.000
EPS attributable to Nexa shareholders (in US\$)	0.44	(0.04)	0.62	0.10	0.41	(0.30)	0.06	0.40

(1) Reflects corrected EPS for prior periods. See "Restatement of Earnings Per Share" on note 2.2.2 of NEXA's Financial Statements for further information.

Segments Consolidation

US\$ million	4Q18	3Q18	4Q17	4Q18 vs. 4Q17	FY18	FY17	FY18 vs. FY17
Revenues - Mining	285.5	249.6	374.7	(23.8%)	1163.7	1213.2	(4.1%)
Revenues - Smelting	470.0	483.0	564.3	(16.7%)	2030.6	1952.0	4.0%
Eliminations	(171.7)	(139.7)	(233.8)	(26.6%)	(704.0)	(721.5)	(2.4%)
Adjustments	(0.5)	2.2	(2.2)	(77.2%)	0.9	5.7	(83.8%)
Revenues	583.4	595.1	703.0	(17.0%)	2491.2	2449.5	1.7%
Cost of sales - Mining	(176.6)	(178.5)	(178.7)	(1.2%)	(694.0)	(680.8)	1.9%
Cost of sales - Smelting	(435.7)	(444.1)	(501.5)	(13.1%)	(1876.0)	(1746.8)	7.4%
Eliminations	171.7	139.7	233.8	(26.6%)	704.0	721.5	(2.4%)
Adjustments	65.1	(26.7)	36.3	79.4%	(22.9)	(46.7)	(50.9%)
Cost of sales	(375.6)	(509.5)	(410.0)	(8.4%)	(1888.9)	(1752.8)	7.8%
Gross Profit - Mining	108.9	71.2	196.0	(44.4%)	469.7	532.4	(11.8%)
Gross Profit - Smelting	34.3	38.9	62.8	(45.3%)	154.5	205.2	(24.7%)
Adjustments	64.6	(24.5)	34.1	89.4%	(22.0)	(41.0)	(46.3%)
Gross Profit	207.9	85.6	292.9	(29.0%)	602.3	696.7	(13.6%)
Adjusted EBITDA - Mining	88.4	65.1	183.0	(51.7%)	430.4	521.5	(17.5%)
Adjusted EBITDA - Smelting	41.2	57.0	31.5	30.9%	174.8	152.7	14.4%
Adjustments	1.2	(2.2)	8.0	(85.0%)	(0.4)	(6.8)	(94.6%)
Adjusted EBITDA	130.8	119.8	222.5	(41.2%)	604.8	667.5	(9.4%)

Quarterly Mining Production: by Asset

Consolidated	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Treated Ore (kt)	3,026	3,269	3,369	3,351	3,149	3,147	3,321	3,435
QoQ	-11.9%	8.0%	3.1%	-0.5%	-6.0%	-0.1%	5.5%	3.4%
YoY	-7.1%	-0.4%	-1.3%	-2.4%	4.1%	-3.7%	-1.4%	2.5%
Zinc grade (%)	3.48	3.21	3.04	3.50	3.19	3.35	3.13	3.39
Copper grade (%)	0.39	0.45	0.43	0.40	0.42	0.36	0.38	0.35
Lead grade (%)	0.52	0.52	0.50	0.58	0.50	0.53	0.52	0.56
Silver grade (oz/t)	0.86	0.93	0.84	0.96	0.88	0.89	0.95	0.93
Gold grade (oz/t)	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.00
Zn Content (kt)	92	92	89	102	87.2	92.3	90.2	103
Cu Content (kt)	9	12	12	11	10.7	9.0	10.2	9
Pb Content (kt)	12	13	13	15	12.3	12.7	12.7	15
Ag Content (koz)	1,706	2,046	1,923	2,271	1,883.7	1,846.8	2,064.7	2,197
Au Content (koz)	8	9	7	8	7.4	7.1	7.1	8
Zn Eq production (kt)	135	144	139	154	134	135	137	150

Cerro Lindo, Peru	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Treated Ore (kt)	1,713	1,785	1,924	1,876	1,712	1,635	1,733	1,834
QoQ	-10.4%	4.2%	7.8%	-2.5%	-8.7%	-4.5%	5.9%	5.9%
YoY	-3.6%	-1.1%	3.8%	-1.9%	0.0%	-8.4%	-10.0%	-2.2%
Zinc grade (%)	2.51	2.28	2.00	2.57	1.79	2.21	1.93	2.35
Copper grade (%)	0.64	0.76	0.70	0.67	0.69	0.62	0.67	0.58
Lead grade (%)	0.29	0.24	0.22	0.32	0.21	0.25	0.25	0.30
Silver grade (oz/t)	0.70	0.72	0.63	0.73	0.63	0.62	0.78	0.72
Gold grade (oz/t)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Zn Content (kt)	39	37	35	45	28	33	30	40
Cu Content (kt)	9	12	12	11	10	9	10	9
Pb Content (kt)	4	3	3	5	3	3	3	4
Ag Content (koz)	803	880	840	1,024	770	700	934	940
Au Content (koz)	1	1	1	1	1	1	1	1
Zn Eq production (kt)	68	71	69	78	58	59	60	68

Vazante, Brazil	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Treated Ore (kt)	310	331	337	343	313	327	363	371
QoQ	-7.2%	6.8%	1.9%	1.6%	-8.6%	4.3%	11.1%	2.1%
YoY	-9.1%	-4.9%	-5.7%	2.6%	1.1%	-1.2%	7.6%	8.2%
Zinc grade (%)	13.09	11.70	11.80	12.66	13.62	12.73	11.24	11.22
Lead grade (%)	0.32	0.38	0.34	0.32	0.30	0.38	0.33	0.33
Silver grade (oz/t)	0.62	0.66	0.48	0.46	0.54	0.70	0.63	0.58
Zn Content (kt)	34	33	34	35	36	35	35	36
Pb Content (kt)	0.2	0.4	0.3	0.3	0.2	0.3	0.3	0.3
Ag Content (koz)	74	111	88	83	75	92	105	108
Zn Eq production (kt)	35	33	34	35	36	36	35	37

El Porvenir, Peru	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Treated Ore (kt)	381	497	441	516	535	539	534	542
QoQ	-27.7%	30.6%	-11.4%	17.0%	3.8%	0.7%	-1.0%	1.5%
YoY	-28.4%	-6.4%	-21.8%	-2.1%	40.5%	8.4%	21.1%	5.1%
Zinc grade (%)	2.86	2.76	2.77	3.04	3.20	2.94	2.89	3.11
Copper grade (%)	0.14	0.14	0.12	0.13	0.16	0.16	0.13	0.15
Lead grade (%)	0.98	1.01	1.11	1.07	0.96	1.00	0.98	0.97
Silver grade (oz/t)	1.98	2.05	2.06	2.08	1.82	1.91	1.93	2.01
Gold grade (oz/t)	0.02	0.01	0.01	0.02	0.01	0.06	0.02	0.01
Zn Content (kt)	10	12	11	14	15	14	14	15
Cu Content (kt)	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1
Pb Content (kt)	3	4	4	4	4	4	4	4
Ag Content (koz)	475	643	568	671	614	648	618	654
Au Content (koz)	2	2	2	2	2	3	2	2
Zn Eq production (kt)	15	20	18	22	23	22	21	23

Atacocha, Peru	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Treated Ore (kt)	353	387	385	382	368	384	401	399
QoQ	-10.1%	9.8%	-0.5%	-1.0%	-3.6%	4.4%	4.4%	-0.3%
YoY	-4.8%	8.3%	4.9%	-2.7%	4.3%	-0.9%	4.0%	4.6%
Zinc grade (%)	1.37	1.49	1.53	1.32	1.42	1.42	1.49	1.40
Copper grade (%)	0.07	0.09	0.09	0.10	0.10	0.10	0.10	0.10
Lead grade (%)	1.14	1.21	1.21	1.32	1.28	1.11	1.11	1.22
Silver grade (oz/t)	1.32	1.38	1.41	1.60	1.49	1.40	1.36	1.42
Gold grade (oz/t)	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
Zn Content (kt)	4	5	5	4	4	4	5	4
Pb Content (kt)	3	4	4	4	4	4	4	4
Ag Content (koz)	354	412	428	493	425	406	408	440
Au Content (koz)	5	6	5	4	4	4	4	4
Zn Eq production (kt)	11	13	12	12	11	11	11	12

Morro Agudo, Brazil	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Treated Ore (kt)	270	268	281	236	220	261	291	289
QoQ	0.1%	-0.8%	4.9%	-16.1%	-6.7%	18.8%	11.2%	-0.6%
YoY	13.5%	11.1%	4.1%	-12.6%	-18.5%	-2.4%	3.4%	22.6%
Zinc grade (%)	2.18	2.20	2.12	2.22	2.18	2.40	2.84	3.22
Lead grade (%)	0.71	0.69	0.70	0.67	0.63	0.62	0.71	0.86
Zn Content (kt)	5	5	5	5	4	6	8	9
Pb Content (kt)	1	2	1	1	1	1	1	2
Zn Eq production (kt)	7	7	6	6	5	7	9	11

Quarterly Smelting Sales: by Asset

Consolidated	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Metallic zinc Sales (kt)	130.6	135.9	143.6	145.3	137.3	143.1	149.7	148.5
QoQ	-12.1%	4.1%	5.6%	1.2%	-5.5%	4.2%	4.6%	-0.8%
YoY	-2.9%	-6.9%	-0.3%	-2.2%	5.1%	5.3%	4.3%	2.2%
Global Recovery	94.3%	94.1%	94.8%	95.0%	94.4%	93.3%	93.7%	93.6%
Zinc oxide Sales (kt)	8.9	9.7	10.2	9.7	9.1	9.0	10.2	9.8
QoQ	-5.8%	9.2%	5.0%	-4.8%	-5.8%	-1.5%	13.9%	-4.3%
YoY	4.7%	-0.5%	4.9%	2.8%	2.7%	-7.4%	0.5%	1.1%

Cajamarquilla, Peru	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Metallic zinc Sales (kt)	72.7	72.0	83.8	84.2	79.0	81.9	84.3	87.5
QoQ	-15.0%	-0.9%	16.4%	0.5%	-6.2%	3.7%	2.9%	3.9%
YoY	-5.9%	-14.8%	2.9%	-1.5%	8.7%	13.7%	0.6%	4.0%
Global Recovery	94.7%	95.1%	95.8%	96.3%	95.0%	93.7%	93.3%	93.3%

Três Marias, Brazil	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Metallic zinc Sales (kt)	38.0	41.3	39.7	42.0	40.1	42.0	44.5	40.8
QoQ	-8.2%	8.7%	-3.9%	6.0%	-4.5%	4.7%	5.7%	-8.2%
YoY	-3.3%	3.7%	-1.8%	1.6%	5.6%	1.8%	12.1%	-3.0%
Global Recovery	94.9%	94.8%	94.4%	94.7%	94.2%	93.4%	94.0%	93.7%
Zinc oxide Sales (kt)	8.9	9.7	10.2	9.7	9.1	9.0	10.2	9.8
QoQ	-5.8%	9.2%	5.0%	-4.8%	-5.8%	-1.5%	13.9%	-4.3%
YoY	4.7%	-0.5%	4.9%	2.8%	2.7%	-7.4%	0.5%	1.1%

Juiz de Fora, Brazil	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Metallic zinc Sales (kt)	19.9	22.7	20.1	19.1	18.2	19.2	21.0	20.2
QoQ	-8.4%	13.6%	-11.2%	-5.1%	-4.8%	5.7%	9.4%	-3.9%
YoY	10.4%	4.6%	-9.5%	-12.3%	-8.8%	-15.1%	4.6%	5.9%
Global Recovery	92.0%	89.1%	92.4%	90.4%	92.4%	91.3%	94.9%	95.3%

Quarterly Mining Cash Cost: by Asset

As mentioned in the previous quarter, we revised our AISC calculations to include sustaining CAPEX and also health, safety and environment, tailing dams and other non-expansion related CAPEX.

Consolidated in US\$/t	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Cash Cost Net of By-products in US\$/t	844	462	437	349	488	553	760	694
Sustaining Cash Cost Net of By-products	964	683	577	533	630	768	1,092	1,285
AISC in US\$/t	1,097	833	752	809	787	920	1,209	1,417

Cerro Lindo, Peru in US\$/t	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Cash Cost Net of By-products in US\$/t	212	-148	-381	-431	-502	-142	119	243
Sustaining Cash Cost Net of By-products	228	-115	-297	-370	-484	-116	296	712

El Porvenir, Peru in US\$/t	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Cash Cost Net of By-products in US\$/t	1,767	775	1,235	1,183	1,268	905	1,369	1,215
Sustaining Cash Cost Net of By-products	2,353	1,612	1,390	1,380	1,576	1,163	1,766	1,944

Atacocha, Peru in US\$/t	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Cash Cost Net of By-products in US\$/t	1,063	-851	-233	-563	286	1,411	940	1,838
Sustaining Cash Cost Net of By-products	1,224	-620	-62	251	787	3,006	1,540	3,124

Vazante, Brazil in US\$/t	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Cash Cost Net of By-products in US\$/t	1,076	1,028	910	851	827	818	867	826
Sustaining Cash Cost Net of By-products	1,180	1,224	1,038	1,053	946	993	1,215	1,386

Morro Agudo, Brazil in US\$/t	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Cash Cost Net of By-products in US\$/t	1,637	1,611	1,460	1,887	2,154	1,543	1,135	1,039
Sustaining Cash Cost Net of By-products	1,792	1,891	1,948	2,493	2,414	1,832	1,607	1,723

Quarterly Smelting Cash Cost: by Asset

As mentioned in the previous quarter, we revised our AISC calculations to include sustaining CAPEX and also health, safety and environment, tailing dams and other non-expansion related CAPEX.

Consolidated cash cost	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Cash Cost Net of By-products in US\$/t	2,427	2,371	2,679	2,947	3,163	2,862	2,453	2,420
Sustaining Cash Cost	2,532	2,551	2,834	3,098	3,238	2,991	2,599	2,628
AISC in US\$/t	2,637	2,654	2,925	3,265	3,325	3,092	2,684	2,726

Cash cost Cajamarquilla, Peru	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Cash Cost Net of By-products in US\$/t	2,502	2,388	2,649	2,850	3,087	2,948	2,480	2,427
Sustaining Cash Cost	2,567	2,506	2,692	2,888	3,113	2,970	2,532	2,554

Cash cost Três Marias, Brazil	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Cash Cost Net of By-products in US\$/t	2,333	2,240	2,674	3,089	3,294	2,830	2,439	2,617
Sustaining Cash Cost	2,472	2,469	2,951	3,349	3,415	3,092	2,607	2,850

Cash cost Juiz de Fora, Brazil	1Q17	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18
Cash Cost Net of By-products in US\$/t	2,448	2,525	2,349	2,549	3,212	2,643	2,368	2,419
Sustaining Cash Cost	2,581	2,735	2,589	2,828	3,330	2,853	2,626	2,872

All-in Sustaining Cost - Mining

4Q18

As mentioned in the previous quarter, we revised our AISC calculations to include sustaining CAPEX and also health, safety and environment, tailing dams and other non-expansion related CAPEX.

(in millions of US\$)		Vazante	Morro Agudo	Cerro Lindo	El Porvenir	Atacocha	Consolidation of Operations	Corporate & Others	Mining
	Sales Volume (Contained Metal) - Zn								
	Tonnes	35,777	8,653	41,261	15,845	4,068	105,603		105,603
(+)	COGS	19.9	12.3	84.4	42.0	20.4	179.1	-2.4	176.6
(+)	On-site G&A	1.4	1.7	0.0	0.0	0.0	3.1		3.1
(-)	By-products revenue	-1.8	-5.6	-69.2	-18.1	-9.6	-104.3	0.5	-103.8
(+)	Treatment Charges	14.9	3.0	15.0	6.5	1.6	41.0		41.0
(+)	Selling Expenses	0.0	0.3	0.3	0.5	0.2	1.2		1.2
(-)	Depreciation, amortisation and depletion	-4.4	-2.4	-18.5	-8.4	-5.3	-39.1	-0.1	-39.2
(-)	Royalties	-0.4	-0.3				-0.8		-0.8
(+)	Others	0.0	0.0	-2.0	-3.3	0.3	-5.0		-5.0
(=)	Cash Cost (Sold)	29.6	9.0	10.0	19.3	7.5	75.3	-2.1	73.3
	Cash Cost (Sold) (per ton)	826.3	1,039.4	243.2	1,214.9	1,837.7	713.2	0.0	693.7
(+)	Sustaining Capital Expenditure	20.0	5.9	19.4	11.6	5.2	62.1	0.4	62.5
(=)	Sustaining Cash Cost (Sold)	49.6	14.9	29.4	30.8	12.7	137.4	-1.7	135.7
	Sustaining Cash Cost (Sold) (per ton)	1,385.6	1,723.3	712.3	1,944.0	3,124.2	1,301.0	0.0	1,285.3
(+)	Workers participation & Bonus	0.3	0.2	2.1	0.5	-0.2	2.9		2.9
(+)	Royalties	0.4	0.3	0.0	0.4	0.2	1.4		1.4
(+)	Corporate G&A							9.6	9.6
(=)	AISC (Sold)								149.7
(=)	AISC (Sold)								1,417.1
(=)	AISC (Sold) in c/lb								0.64

4Q17

	Vazante	Morro Agudo	Cerro Lindo	El Porvenir	Atacocha	Consolidation of Operations	Corporate & Others	Mining	
	Sales Volume (Contained Metal) - Zn								
	Tonnes								
	34,784	4,871	45,154	13,411	3,847	102,067		102,067	
(+)	COGS	17.9	13.0	84.1	36.1	25.3	176.3	2.4	178.7
(+)	On-site G&A	1.5	1.1	0.0	0.0	0.0	2.6	0.0	2.6
(-)	By-products revenue	-1.3	-4.7	-94.2	-19.3	-21.3	-140.8	0.4	-140.5
(+)	Treatment Charges	15.5	2.0	17.3	6.2	1.7	42.8	0.0	42.8
(+)	Selling Expenses	0.0	0.2	-0.5	0.4	-0.2	-0.1	0.0	-0.1
(-)	Depreciation, amortisation and depletion	-3.6	-2.0	-21.7	-8.3	-6.3	-42.0	-0.1	-42.1
(-)	Royalties	-0.4	-0.4	0.0	0.0	0.0	-0.8	0.0	-0.8
(-)	Others	0.0	0.0	-4.4	0.8	-1.3	-5.0	0.0	-5.0
(=)	Cash Cost (Sold)	29.6	9.2	-19.5	15.9	-2.2	33.0	2.6	35.7
	Cash Cost (Sold) (per ton)	850.8	1,887.2	-430.9	1,183.1	-563.3	323.6	0.0	349.4
(+)	Sustaining Capital Expenditure	7.0	2.9	2.7	2.6	3.1	18.5	0.2	18.7
(=)	Sustaining Cash Cost (Sold)	36.6	12.1	-16.7	18.5	1.0	51.5	2.9	54.4
	Sustaining Cash Cost (Sold) (per ton)	1,053.0	2,492.6	-370.4	1,380.1	251.2	504.8	0.0	532.8
(+)	Workers participation & Bonus	0.8	0.3	9.9	1.5	0.3	12.8		12.8
(+)	Royalties	0.4	0.4	0.0	0.5	0.3	1.6		1.6
(+)	Corporate G&A							13.8	13.8
(=)	AISC (Sold)								82.6
(=)	AISC (Sold)								809.2
(=)	AISC (Sold) in c/lb								0.37

All-in Sustaining Cost – Smelting

4Q18

As mentioned in the previous quarter, we revised our AISC calculations to include sustaining CAPEX and also health, safety and environment, tailing dams and other non-expansion related CAPEX.

		Três Marias	Juiz de Fora	Cajamarquilla	Consolidation of Operations	Corporate	Smelting
	Sales Volume (Zinc content in Products) Tonnes	48,485	20,067	87,376	155,928		155,928
(+)	COGS	135.8	57.5	252.3	445.7	-10.0	435.7
(-)	Cost of services rendered ⁽¹⁾	-2.9	-1.0	-8.1	-12.0	0.0	-12.0
(+)	On-site G&A	1.2	0.8	3.2	5.2	0.4	5.6
(-)	Depreciation, amortisation and depletion	-3.6	-3.4	-15.7	-22.8	-0.5	-23.3
(-)	By-products revenue	-3.6	-5.3	-19.7	-28.6	0.0	-28.6
(+)	Others				0.0		0.0
(=)	Cash Cost (Sold)	126.9	48.5	212.1	387.5	-10.1	377.4
	Cash Cost (Sold) (per ton)	2,616.8	2,418.7	2,427.1	2,485.0		2,420.4
(+)	Sustaining Capital Expenditure	11.3	9.1	11.1	31.5	0.9	32.3
(=)	Sustaining Cash Cost (Sold)	138.2	57.6	223.2	418.9	-9.2	409.7
	Sustaining Cash Cost (Sold) (per ton)	2,849.5	2,871.8	2,554.0	2,686.8		2,627.7
(+)	Workers participation & Bonus	0.3	0.3	0.4	1.0		1.0
(+)	Corporate G&A					14.3	14.3
(=)	AISC (Sold)						425.0
(=)	AISC (Sold) (per ton)						2,725.9
(=)	AISC (Sold) in c/lb						1.24

4Q17

As mentioned in the previous quarter, we revised our AISC calculations to include sustaining CAPEX and also health, safety and environment, tailing dams and other non-expansion related CAPEX.

	Três Marias	Juiz de Fora	Cajamarquilla	Consolidation of Operations	Corporate	Smelting
Sales Volume (Zinc content in Products)						
Tonnes	49,636	18,976	84,011	152,624	0	152,624
(+) COGS	160.4	59.8	277.1	497.2	4.3	501.5
(-) Cost of services rendered ⁽¹⁾	-2.6	-1.1	-10.6	-14.4	1.5	-12.9
(+) On-site G&A	1.2	0.8	4.3	6.2	0.5	6.7
(-) Depreciation, amortisation and depletion	-4.2	-5.9	-16.2	-26.3	2.4	-24.0
(-) By-products revenue	-1.3	-5.2	-15.1	-21.6	0.0	-21.6
(+) Others	0.0	0.0	0.0	0.0	0.0	
(=) Cash Cost (Sold)	153.3	48.4	239.4	441.1	8.6	449.7
Cash Cost (Sold) (per ton)	3,089.2	2,549.1	2,849.6	2,890.2		2,946.8
(+) Sustaining Capital Expenditure	12.9	5.3	3.3	21.4	1.7	23.1
(=) Sustaining Cash Cost (Sold)	166.2	53.7	242.7	462.5	10.3	472.8
Sustaining Cash Cost (Sold) (per ton)	3,348.8	2,827.9	2,888.3	3,030.6		3,098.0
(+) Workers participation & Bonus	0.6	0.6	0.4	1.6	0.0	1.6
(+) Corporate G&A					23.9	23.9
(=) AISC (Sold)						498.3
(=) AISC (Sold) (per ton)						3,265.1
(=) AISC (Sold) in c/lb						1.48