2. SIGNIFICANT ACCOUNTING POLICIES (continued)

n. Exploration and evaluation assets (continued)

Exploration and evaluation expenditures related to an area of interest are written off as incurred (excluding fixed assets), unless they are capitalised and carried forward, on an area of interest basis, provided that one of the following conditions is met:

(i) the rights of tenure of an area are current and it is considered probable that the costs will be recouped through successful development and exploitation of the area of interest or, alternatively, by its sale; or

(ii) exploration activities in the area of interest have not yet reached the stage which would permit a reasonable assessment of the existence or otherwise of economically recoverable reserves and active and significant operations in or in relation to the area of interest are continuing.

Capitalised costs include costs directly related to exploration and evaluation activities in the relevant area of interest, and exclude physical assets which are recorded in fixed assets.

General and administrative costs are allocated to an exploration or evaluation asset only to the extent that those costs can be related directly to operational activities in the relevant area of interest.

Capitalised exploration and evaluation expenditure are written off where the above conditions are no longer satisfied.

Identifiable exploration and evaluation assets acquired in a business combination are recognised initially as assets at fair value on acquisition and subsequently at cost less impairment charges. Exploration and evaluation expenditure incurred subsequent to the acquisition of an exploration asset in a business combination is accounted for in accordance with the accounting policy outlined above.

Exploration and evaluation assets are not depreciated. Exploration and evaluation assets are assessed for impairment if facts and circumstances indicate that impairment may exist.

Exploration and evaluation assets are also tested for impairment once commercial reserves are found, before the assets are transferred to Mining properties - mines under development ("mines under development").

Expenditure incurred before the entity has obtained the legal right to explore a specific area is expensed as incurred.

o. Mining properties

Development expenditure incurred by or on behalf of the Group is accumulated separately for each area of interest in which economically recoverable resources have been identified. Such expenditure comprises costs directly attributable to the construction of a mine and the related infrastructure and excludes physical assets and land rights, which are recorded as fixed assets.

Once a development decision has been taken, the carrying amount of the exploration and evaluation assets in respect of the area of interest is transferred to mines under development under "mining properties" and aggregated with the subsequent development expenditure.

Mines under development are reclassified as Mining properties - mines in production ("mines in production") at the end of the commissioning phase, when the mine is capable of operating in the manner intended by management.

2. SIGNIFICANT ACCOUNTING POLICIES (continued)

o. Mining properties (continued)

No depreciation is recognised for mines under development until they are reclassified as mines in production.

When further development expenditure is incurred on mining properties after the commencement of production, the expenditure is carried forward as part of mines in production when it is probable that additional future economic benefits associated with the expenditure will flow to the Group. Otherwise, such expenditure is classified as a cost of production.

Mines in production are amortised using the units-of-production method, with separate calculations being made for each area of interest.

Identifiable mining properties acquired in a business combination are initially recognised as assets at their fair value. Development expenses incurred subsequent to the acquisition of the mining properties are accounted for in accordance with the policy outlined above.

Mines under development and mines in production are tested for impairment in accordance with the accounting policy described in Note 2r.

p. Fixed assets

Fixed assets are stated at cost less accumulated depreciation. Historical cost includes expenditure that is directly attributable to the acquisition of fixed assets. Depreciation of the main mining equipment used in mining operations is calculated using the unit-of-production method. Other fixed assets, except land, are depreciated using the straight-line method to their estimated residual value over the lesser of the estimated useful lives of the assets, the life of the mine or the IUP term as follows:

	Years
Structure, buildings, improvements and river channel	5 to 30 and 50*)
Plant, machinery and mining equipment	4 to 34 and 50*)
Office, hospital, housing equipment and furniture and fixture	3 to 30 and 50*)
Transportation equipment	4 to 8

*) Useful life of fixed assets of 50 years only for fixed assets in the Company.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amounts of replaced parts are derecognised. All other repairs and maintenances are charged to profit or loss during the financial period in which they are incurred.

Gains or losses on disposals of fixed assets are recognised in profit or loss.

The assets' residual values, useful lives and depreciation method are reviewed and adjusted if appropriate, at the end of each reporting period.

The accumulated costs of the construction of the buildings and plant and the installation of machinery are capitalised as construction-in-progress. These costs are reclassified to fixed asset accounts when the construction or installation is complete. Depreciation is charged from the date the assets are ready for use in the manner intended by management.

2. SIGNIFICANT ACCOUNTING POLICIES (continued)

q. Investment properties

Investment properties represent land or buildings that are held for operating lease, rather than for use or sale in the ordinary course of business. Investment properties also include properties that are being constructed or developed for future use as investment properties.

Investment properties are stated at fair value which reflects market conditions which is determined by independent appraiser. Fair value is based on active market prices, adjusted, if necessary, for differences in the nature, location or condition of the specific asset. If this information is not available, the Group uses alternative valuation methods, such as recent prices in less active markets or discounted cash flow projections.

Investment properties under construction are measured at cost until its fair value becomes reliably measureable or the construction is completed, whichever is earlier. Changes in fair values are recognised in profit or loss.

r. Impairment of non-financial assets

Fixed assets and other non-current assets, excluding goodwill, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the carrying amount of the asset exceeds its recoverable amount, which is the higher of an asset’s fair value less cost to sell and value in use. For the purpose of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows. Impairment losses relating to goodwill would not be reversed.

s. Trade payables

Trade payables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest rate method.

t. Borrowings

Borrowings are recognised initially at fair value, net of transaction costs incurred. Borrowings are subsequently carried at amortised cost using the effective interest.

Fees paid on the establishment of loan facilities are recognised as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until the drawdown occurs. To the extent that there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalised as a pre-payment for liquidity services and amortised over the period of the facility to which it relates.

Borrowing costs that are directly attributable to the acquisition or construction of a qualifying asset are capitalised until the asset is substantially completed. The amount to be capitalised is determined as the actual borrowing cost incurred during the period, less any income earned on the temporary investment of such borrowings. For borrowings that are not directly attributable to a qualifying asset, the amount to be capitalised is determined by applying a capitalisation rate to the amount expended on the qualifying assets.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer the settlement of the liability for at least 12 months after the reporting date.

u. Leases

The Group leases certain fixed assets. Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to profit or loss on a straight-line basis over the term of the lease.

2. SIGNIFICANT ACCOUNTING POLICIES (continued)

u. Leases (continued)

Leases of fixed assets where the Group as lessee has substantially all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalised at the lease's commencement at the lower of the fair value of the leased asset and the present value of the minimum lease payments.

Each lease payment is allocated between the liability and finance charges so as to achieve a constant rate on the outstanding finance lease balance. Finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The fixed asset acquired under finance leases is depreciated over the shorter of the useful life of the asset and the lease term.

v. Employee benefits

i. Short-term employee benefits

Short-term employee benefits are recognised when they accrue to the employees.

ii. Pension benefits, other post-employment benefits and other long-term benefits

The Group is required to provide a minimum amount of pension benefits in accordance with Labour Law No. 13/2003 or the Group's Collective Labour Agreement ("CLA"), whichever is higher. Since the Labour Law and the CLA set the formula for determining the minimum amount of benefits, in substance pension plans under the Labour Law or the CLA represent defined benefit plans.

Defined benefit pension plans programme define an amount at pension benefit that an employee will receive on retirement, usually depends on factors such as age, years of service and compensations.

The pension benefit obligation is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of government bonds (considering currently there is no deep market for high quality corporate bonds) that are denominated in Rupiah, the currency in which the benefits will be paid and that have terms to maturity approximating the terms to the related pension obligation.

The Group also provides other post-employment benefits and other long-term benefits such as long service reward, death allowance, jubilee rewards, and separation reward. The long service reward is paid when the employees reach their retirement age. Death allowance is paid when the employee or the qualified family members pass away. The value of benefits provided to the employee is based on the Company Regulation or the CLA. The separation reward benefit is paid to employees in the event of voluntary resignation, subject to a minimum number of years of service. These benefits have been accounted for using the same methodology as for the defined benefit pension plan.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise, except for other long-term benefits where actuarial gains and losses are directly recognised as expenses in profit or loss.

Past service costs are recognised immediately in profit or loss. Gains or losses on the curtailment or settlement of a defined benefit plan are recognised in profit or loss when the curtailment or settlement occurs.

2. SIGNIFICANT ACCOUNTING POLICIES (continued)

v. Employee benefits (continued)

iii. Post-employment medical benefits

The Group provides post-employment medical benefits to their retirees. The entitlement to these benefits is usually based on the employee remaining in service up to retirement age and satisfy certain minimum service period. The expected costs of these benefits are accrued over the period of employment, using methodology similar for defined benefit pension plans.

w. Provisions

Provision is recognised when the Group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount can be reliably estimated. Provision is not recognised for future operating losses.

The Group has certain obligations to restore and rehabilitate mining areas following the completion of production. Restoration, rehabilitation and environmental expenditure to be incurred during the production phase of operations are charged as part of the cost of production. Provisions are measured at the present value of the expenditure expected to be required to settle the obligation using the pre-tax discount rate that reflects the current market assessment of the time value of money and the risks specific to the obligation. Obligation is recognised at its present value only if the impact of discounting is considered material. Changes in estimated restoration, rehabilitation and environmental expenditure to be incurred are accounted for on a prospective basis over the remaining life of mine. The increase in other provision due to the passage of time is recognised as finance costs.

x. Taxation

The tax expenses comprise current and deferred tax. Tax is recognised in profit or loss, except to the extent that it relates to items recognised in other comprehensive income or directly in equity.

The current income tax is calculated on the basis of the tax laws enacted or substantively enacted at the reporting date in the countries where the Company and its subsidiaries operate and generate taxable income.

Deferred income tax is recognised, using the balance sheet liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, deferred tax liabilities are not recognised if they arise from the initial recognition of goodwill. Deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss.

Deferred income tax is determined using tax rates that have been enacted or substantially enacted as at the reporting period and is expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

Deferred income tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred income tax assets and liabilities are offset when there are legally-enforceable right to offset current tax assets against current tax liabilities and when the deferred income taxes assets and liabilities relate to income taxes levied by the same taxation authority on the same taxable entities, or on different taxable entities where there is either an intention to settle the balances on a net basis, or to realise the assets and settle the liability simultaneously.

2. SIGNIFICANT ACCOUNTING POLICIES (continued)

y. Share capital

Incremental costs directly attributable to the issuance of new ordinary shares or options are shown in equity as a deduction, net of tax, from the proceeds.

z. Dividend distribution

Dividend distribution to the Company's shareholder is recognised as a liability after the dividends are approved by the Company's shareholder in the General Meeting of Shareholders.

aa. Earnings per share

Basic earnings per share are calculated by dividing the profit attributable to the owner of the parent entity of the Company by the weighted average number of ordinary shares outstanding during the year.

ab. Segment reporting

Operating segments are reported in a consistent manner with the internal reporting provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing the performance of the operating segments and making strategic decisions is the Board of Directors.

3. CRITICAL ACCOUNTING ESTIMATES, ASSUMPTIONS AND JUDGEMENTS

The preparation of consolidated financial statements in conformity with Indonesian Financial Accounting Standards requires management to make estimates, assumptions and judgements that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenue and expenses during the reporting period. Estimates, assumptions and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

The Group has identified the following critical accounting policies under which significant judgements, estimates and assumptions are made and where actual results may differ from these estimates under different assumptions and conditions and may materially affect financial results or the financial position reported in future periods.

3.1 Critical accounting estimates and assumptions

(a) Estimated useful lives of fixed assets

The Group periodically reviews the estimated useful lives of fixed assets based on technical specification, future technological developments and market behaviour. Future results of operations could be materially affected by changes in the estimates brought about by changes in the factors mentioned above.

3. CRITICAL ACCOUNTING ESTIMATES, ASSUMPTIONS AND JUDGEMENTS (continued)

3.1 Critical accounting estimates and assumptions (continued)

(b) Impairment of non-financial assets

The Group tests whether goodwill has suffered any impairment on an annual basis. Other non-financial assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset exceeds its recoverable amount. The recoverable amount of an asset or a cash generating unit is determined based on the higher of its fair value less costs to sell and its value in use, calculated on the basis of management's assumptions and estimates. Changing the key assumptions, including the expected production and sales volume, commodity prices (considering current and historical prices, price trends and related factors), mineral resources and reserves, operating costs, closure and rehabilitation costs and future capital expenditure, could materially affect the recoverable amount.

(c) Mineral reserve estimates

Mineral reserves are estimates of the amount of output that can be economically and legally exploited from the Group's mining properties. In order to estimate mineral reserves, assumptions are required about a range of geological, technical and economic factors, including quantities, production techniques, stripping ratio, production costs, transportation costs, commodity demand, commodity prices and exchange rates.

Estimating the quantity and/or mineral content of mineral reserves requires the size, shape and depth of mineral bodies or fields to be determined by analysing geological data such as drilling samples. This process may require complex and difficult geological judgements to interpret the data.

Because the economic assumptions used to estimate reserves change from period to period and because additional geological data is generated during the course of operations, reserves estimates may change from period to period. Changes in the reported reserves may affect the Group's financial results and financial position in a number of ways, including the following:

- asset carrying values may be affected due to changes in estimated future cash flows.
- depreciation, depletion and amortisation charged in the consolidated statement of profit or loss and other comprehensive income may change where such charges are determined on a units of production basis, or where the useful economic lives of assets change.
- decommissioning, site restoration and environmental provision may change where changes in estimated reserves affect expectations about the timing or cost of these activities.
- the carrying value of deferred tax assets/liabilities may change due to changes in estimates of the likely recovery of the tax benefits.

(d) Provision for environmental reclamation and mine closure

The Group's accounting policy for the recognition of environmental reclamation and mine closure provision requires significant estimates and assumptions such as requirements of the relevant legal and regulatory framework; the magnitude of possible contamination and the timing, extent and costs of required environmental reclamation and mine closure activity. These uncertainties may result in future actual expenditure differing from the amounts currently provided. If total current year expenditure related to past activity is higher than the existing balance, the differences will be charged to the periods where the excess arises. The provision recognised for each site is periodically reviewed and updated based on the facts and circumstances available at the time.

3. CRITICAL ACCOUNTING ESTIMATES, ASSUMPTIONS AND JUDGEMENTS (continued)

3.1 Critical accounting estimates and assumptions (continued)

(e) Post-employment benefit obligations

The present value of the pension obligation depends on a number of factors that are determined on an actuarial basis using a number of assumptions. The assumptions used in determining the net cost/(income) for pensions include the discount rate, future salary increase, future remuneration changes, employee attrition rates, future medical cost increase, life expectancy and the expected remaining periods of service of employees. Any changes in these assumptions will have an impact on the carrying amount of the pension obligation.

Other key assumptions for pension obligations are based in part on current market conditions. Additional information is disclosed in Note 28.

(f) Fair value of PT Freeport Indonesia (“PTFI”) shares and fair value in connection with ICA acquisition

On 21 December and 28 December 2018, the Group acquired additional interest in PTFI’s shares, both directly and through PT Indocoppper Investama as well as 46.12% additional shares of ICA from Showa Denko K.K. (“SDK”).

The Group recognised a gain on the fair value adjustment of PTFI’s share ownership and a gain on the acquisition of ICA where the determination of fair value involves significant judgement and estimates.

(g) Allowance for impairment losses on trade receivables

The Group evaluates specific accounts when it has information that certain customers are unable to meet their financial obligations. In these cases, the Group uses judgement, based on the best available facts and circumstances, including but not limited to, the length of its relationship with the customer and the customer's current credit status, to record specific provisions for customers against amounts due to reduce its receivable amounts that the Group expects to collect.

3.2 Judgements

(a) Uncertain tax exposure

The Group is subject to taxes in numerous jurisdictions in which the Group operates. On the other hand, several regional taxes are also applicable for the Group. Significant judgement is required in determining the provision for income tax and regional taxes.

Where the final outcome of these matters is different from the amounts initially recorded, such differences will have an impact on the income tax and deferred income tax provision in the year in which this determination is made.

(b) Determination of functional currency

In the process of applying the Group’s accounting policies, the management has to make a judgement on the determination of the functional currency of each of the Group’s entities, which has a significant effect on the amounts recognised in the consolidated financial statements.

3. CRITICAL ACCOUNTING ESTIMATES, ASSUMPTIONS AND JUDGEMENTS (continued)

3.2 Judgements (continued)

(b) Determination of functional currency (continued)

The functional currency of each entity within the Group is the currency of the primary economic environment in which each of the entities operates. It is the currency, among other factors, that mainly influences the sales prices for goods and services of the country (whose competitive forces and regulations mainly determine the sales prices of its goods and services), labours, materials and other costs and the currency in which funds from financing activities are generated.

(c) Assessment of whether the Company has control over Antam, Timah and Bukit Asam

The existence of control encompasses the investor's power over the investee, its exposure, or rights, to variable returns from its involvement with the investee, and its ability to use its power over the investee to affect its returns. The consolidated financial statements include the financial statements of Antam, Timah, and Bukit Asam in which the Company holds, through Series B shares (see Note 30), the majority of the ownership interest in those subsidiaries. In assessing whether it has power over those entities, management applies judgement and considers the rights attached to those ownership interests obtained by virtue of contractual agreement with other shareholders. Those rights have given the Company the ability to direct the activities of those subsidiaries that significantly affect their returns and as such, constitute unilateral control.

(d) Assessment of whether the Inalum Group has control over PTFI

The existence of control encompasses the investor's power over the investee, its exposure, or rights, to variable returns from its involvement with the investee, and its ability to use its power over the investee to affect its returns. The Group has considered the arrangements in the Shareholders Agreement between the Company, IPMM, PTFI and Freeport-McMoran Inc. ("FCX") in determining whether the Group has control over PTFI.

Based on the Shareholders Agreement, the Company and IPMM (the "Inalum Group") has substantive voting rights in PTFI corporate governance by having representatives on the Board of Commissioners, Board of Directors, Nomination Committee, Operating Committee and Finance Committee. Inalum Group has the same number of representatives as FCX on the Board of Commissioners, Board of Directors, Nomination Committee and Finance Committee. The initial members of the Board of Directors are jointly appointed and approved by the shareholders of PTFI. While FCX has more representatives on the Operating Committee, the body that governs the relevant activities of the mining operations of PTFI. The monitoring and balancing systems are enforced to ensure that the Operating Committee is responsible to the Board of Directors and the shareholders.

FCX as the previous major shareholder has the technical expertise to operate PTFI's mines where FCX Group will provide the services needed to support PTFI's operational activities, including consultation and advice on mining operations, exploration, geology, and mining operational recommendation, management information technology and other administrative services needed by PTFI.

(Expressed in millions of Rupiah, unless otherwise stated)

3. CRITICAL ACCOUNTING ESTIMATES, ASSUMPTIONS AND JUDGEMENTS (continued)

3.2 Judgements (continued)

(d) Assessment of whether the Inalum Group has control over PTFI (continued)

Despite the Inalum Group having 51.24% share ownership in PTFI, the Inalum Group will work together with FCX to supervise management's decision making process, while FCX continues to lead the mining operation of PTFI. Therefore, the Inalum Group does not have the unilateral power to control the operation and financial activities of PTFI and the Inalum Group's representatives on the Board of Commissioners, Board of Directors, Nomination Committee, Finance Committee and the Operating Committee of PTFI does not constitute unilateral control.

(e) Assessment of whether the acquisition of PT Indocopper Investama ("PTII") is business combination or assets acquisition

In determining whether the purchase of PTII (now known as IPMM) shares is a business combination or assets acquisition, the Company considered and identified the nature and elements of PTII's business, the ability of PTII in determining the output and whether the market participants are capable of producing outputs if missing elements exist.

The Group's management considers that the relevant activities of PTII (IPMM) only comprise holding an investment in the form of 9.36% ownership in PTFI shares (before diluted) and currently, there are no other relevant activities, such as strategic management process, operational process and resource management process, as well as the capability of the market participants to continue IPMM to produce output in the form of dividends. Therefore, the Group's management considers that the purchase of IPMM's shares is an asset acquisition.

4. TRANSACTIONS WITH ENTITIES UNDER COMMON CONTROL

In 2017, the Company received additional State Equity Participation in the form of transferring all of the series B shares owned by the GoI to Antam, Timah and Bukit Asam as disclosed in Note 30.

The above transaction was accounted for using the pooling-of-interests method as required under SFAS 38 (Revised 2012) "Business Combination of Entities Under Common Control" since the Company, Antam, Timah and Bukit Asam are entities under common control of the GoI.

The difference between the purchase consideration and the carrying value of investments obtained from this transaction is recorded in the account "Additional paid-in capital" in the equity section. The equity of Antam, Timah and Bukit Asam prior to the date of combination is presented under "equity of merging entities" in the equity section. The details of the purchase consideration and the carrying value of the investments are as follows:

	Purchase consideration	Carrying value of investment *)	Additional paid-in capital *)
Bukit Asam	18,347,366	8,847,983	9,499,383
Antam	16,902,338	9,766,879	7,135,459
Timah	6,241,548	3,874,470	2,367,078
Total	**41,491,252**	**22,489,332**	**19,001,920**

The significant impact arising from the accounting policy uniformity on business combination transactions of entities under common control above is the use of the cost model for the class of assets of structure and building in the Company and class of assets of land rights in Antam which previously used the revaluation model.

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

5. BUSINESS COMBINATION

ICA

On 29 May 2018, Antam entered into a Conditional Share Purchase Agreement ("CSPA") with SDK to purchase all the 20% share ownership of SDK in ICA, subject to approvals of the shareholders of both parties, the Ministry of Energy and Mineral Resources ("MEMR"), the Ministry of Law and Human Rights, the Capital Investment Coordinating Board and ICA's lenders. The agreed terms included:

- Transfers of SDK's patent rights of its production processes and certain products to ICA;
- Debt-to-equity conversion of ICA's debts to SDK amounting to US$91,367,000; and
- Termination of various agreements related to joint venture, sale of products, offtake arrangement, trademark, technical assistance and support.

On 28 December 2018, the Conditions Precedent were all satisfied. The Group has effectively owned 100% of ICA since then and therefore has been in control of the entity.

Details of the net assets acquired on the 20% shares in ICA are as follows:

	28 December 2018 *)
Purchase consideration - cash paid	- **)
Fair value of equity interest in ICA held before the business combination	(17,177)
Total consideration	**(17,177)**

**) Cash consideration is amounting to US$1

Recognised amounts of identifiable assets acquired and liabilities assumed	
Cash and cash equivalents	284,521
Trade receivables	51,646
Inventory	235,167
Fixed assets, net	4,244,642
Other assets	186,180
Trade payables	(507,354)
Accruals	(192,422)
Bank borrowings	(921,164)
Other liabilities	(2,075,324)
Total identifiable net assets	**1,305,892**
Bargain purchase gain	(1,323,069)
	(17,177)
Acquisition-related costs	30,028

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

5. BUSINESS COMBINATION (continued)

ICA (continued)

	28 December 2018 *)
Cash consideration	- **)
Balance of cash acquired	(284,521)
Total consideration	**(284,521)**

**) Cash consideration is amounting to US$1

The fair value estimate of the Group's previously held equity interest (80%) and the fair value of identifiable assets acquired and liabilities assumed was calculated by an independent appraiser.

As the result of this acquisition, the Group recognised a total gain of Rp2,226,369 million in the 2018 consolidated profit or loss, which consisted of the following:

	28 December 2018 *)
Bargain purchase gain	1,323,069
Recycling of cumulative translation adjustments	888,629
Gain from remeasuring previously held interest in ICA	14,671
Gain on bargain purchase	**2,226,369**

Had ICA been consolidated from 1 January 2018, the 2018 consolidated statement of profit loss for the year ended 31 December 2018 would show pro forma revenue of Rp65,331,183 million and proforma profit before tax of Rp13,872,305 million.

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

6. CASH AND CASH EQUIVALENTS

	31 December 2019	31 December 2018	31 December 2017
Cash on hand	**9,114**	**3,304**	**4,070**
Cash in banks			
Related parties (Note 39)			
Rupiah	2,114,831	1,968,717	1,607,370
US Dollar	2,100,154	2,205,888	1,191,953
Australian Dollar	808	1,679	11,487
Singapore Dollar	27	284	298
British Pound Sterling	7	28	376
Japanese Yen	1	111	-
	4,215,828	4,176,707	2,811,484
Third parties			
Rupiah	208,773	241,204	153,931
US Dollar	113,778	121,152	161,855
British Pound Sterling	1,136	723	942
Japanese Yen	664	6,865	-
Singapore Dollar	197	-	-
China Renminbi	33	213	64
Australian Dollar	-	307	317
	324,581	370,464	317,109
Total cash in banks	**4,540,409**	**4,547,171**	**3,128,593**
Short-term time deposits			
Related parties (Note 39)			
Rupiah	5,057,780	10,142,235	8,051,531
US Dollar	4,794,388	5,250,654	4,315,038
	9,852,168	15,392,889	12,366,569
Third parties			
Rupiah	180,000	79,000	549,000
US Dollar	-	246,176	94,836
	180,000	325,176	643,836
Total short-term time deposits	**10,032,168**	**15,718,065**	**13,010,405**
Total cash and cash equivalents	**14,581,691**	**20,268,540**	**16,143,068**

The annual interest rates of short-term time deposits are as follows:

	31 December 2019	31 December 2018	31 December 2017
Rupiah	2.00% - 8.15%	3.42% - 9.50%	4.25% - 9.32%
US Dollar	1.80% - 3.30%	1.56% - 2.75%	0.50% - 1.50%

The maximum exposure to credit risk at the end of the reporting year is the carrying amount of cash in banks and the short-term time deposits mentioned above.

(Expressed in millions of Rupiah, unless otherwise stated)

7. TIME DEPOSITS

	31 December 2019	31 December 2018	31 December 2017
Related parties (Note 39)			
Rupiah	3,335,040	459,170	490,000
US Dollar	3,043,550	2,694,156	1,917,042
Total time deposits	**6,378,590**	**3,153,326**	**2,407,042**
Less:			
Current portion	**(6,378,590)**	**(3,153,326)**	**(2,207,042)**
Non-current portion	**-**	**-**	**200,000**

The annual interest rates of time deposits are as follows:

	31 December 2019	31 December 2018	31 December 2017
Rupiah	6.75% - 8.75%	7.20% - 8.25%	6.75%
US Dollar	2.50% - 3.52%	2.89% - 3.05%	1.50%

The maximum exposure to credit risk at the end of the reporting period is the carrying amount of the time deposits mentioned above.

8. TRADE RECEIVABLES

	31 December 2019	31 December 2018	31 December 2017
Third parties	4,812,978	4,917,956	4,908,957
Related parties (Note 39)	2,050,454	2,077,823	3,753,200
	6,863,432	6,995,779	8,662,157
Less: Provision for impairment	(536,879)	(367,348)	(371,267)
Total trade receivables	**6,326,553**	**6,628,431**	**8,290,890**
Less:			
Current portion	**(6,085,688)**	**(6,628,431)**	**(8,290,890)**
Non-current portion	**240,865**	**-**	**-**

The aging analysis of these trade receivables is as follows:

	31 December 2019	31 December 2018	31 December 2017
Current	5,048,885	5,669,834	7,092,685
Overdue:			
1 to 30 days	761,981	468,272	759,573
31 to 90 days	184,723	189,472	427,978
Over 90 days	867,843	668,201	381,921
Total	**6,863,432**	**6,995,779**	**8,662,157**

(Expressed in millions of Rupiah, unless otherwise stated)

8. TRADE RECEIVABLES (continued)

The movements of provision for impairment of trade receivables are as follows:

	31 December 2019	31 December 2018	31 December 2017
At the beginning of the year	367,348	371,267	351,522
Addition during the year	172,075	26,174	25,004
Recovery during the year	(1,619)	-	-
Proceeds from previously impaired amounts of receivables	(925)	(30,093)	(5,259)
At the end of the year	**536,879**	**367,348**	**371,267**

Management believes that the provision for impairment of receivables is adequate to cover any losses on uncollectible trade receivables.

9. INVENTORIES

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Finished good inventories			
Tin metal	2,967,695	917,349	601,691
Coal	1,243,121	1,458,677	1,070,837
Gold and silver	1,001,684	817,940	552,053
Aluminium	274,866	412,190	412,431
Alumina	272,927	91,849	-
Ferronickel	53,289	111,295	26,904
Nickel ore	19,639	283,197	168,593
Others	42,990	159,212	194,520
	5,876,211	4,251,709	3,027,029
Work-in-progress products	3,778,536	3,217,644	2,309,853
Raw materials	1,799,475	1,897,284	479,598
Spare parts and other consumable supplies	1,378,287	1,494,116	1,291,564
Goods-in-transit	245,998	8,975	9,292
Total inventories	**13,078,507**	**10,869,728**	**7,117,336**
Provision for impairment of inventories	(491,369)	(251,392)	(172,640)
Total inventories, net	12,587,138	10,618,336	6,944,696
Less:			
Current portion	**(11,800,289)**	**(9,984,083)**	**(6,465,257)**
Non-current portion	**786,849**	**634,253**	**479,439**

(Expressed in millions of Rupiah, unless otherwise stated)

9. INVENTORIES (continued)

Movements of provision for impairment of inventories are as follows:

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Beginning balance	251,392	172,640	160,397
Addition/(deduction) during the year, net	240,090	78,569	12,215
Difference in foreign currency translation	(113)	183	28
Ending balance	**491,369**	**251,392**	**172,640**

*) As restated (refer to Note 49)

Based on a review at the reporting date, management believes that the above provision is adequate to cover any losses from obsolescence or impairment of inventories.

10. AVAILABLE-FOR-SALE FINANCIAL ASSETS

	31 December 2019	31 December 2018	31 December 2017
At the beginning of the year	325,227	7,685,642	725,046
Additions	-	-	7,255,450
Disposals	(158,669)	(86,718)	(312,224)
Reclassified to Investment in PT Freeport Indonesia (Note 12)	-	(7,255,450)	-
Foreign exchange differences	(3,671)	(8,782)	20,990
Realised (loss)/gain	(22,220)	12,755	(35,305)
Unrealised gain/(loss)	40,546	(22,220)	31,685
At the end of the year	**181,213**	**325,227**	**7,685,642**
Less:			
Current portion	**(181,213)**	**(325,227)**	**(430,192)**
Non-current portion	**-**	**-**	**7,255,450**

Available-for-sale financial assets consist of investments in government bonds, mutual funds and corporate shares.

	31 December 2019	31 December 2018	31 December 2017
Related parties (Note 39)			
US Dollar	179,556	164,901	163,166
Rupiah	-	158,669	245,499
	179,556	323,570	408,665
Third parties			
Rupiah	1,657	1,657	7,276,977
Total available-for-sale financial assets	**181,213**	**325,227**	**7,685,642**

(Expressed in millions of Rupiah, unless otherwise stated)

10. AVAILABLE-FOR-SALE FINANCIAL ASSETS (continued)

In November 2017, the Company received a transfer of 21,300 PTFI shares previously owned by the GoI with a total value of Rp7.26 trillion based on GR 47/2017 and MoF Decree No. 887/KMK.06/2017. PTFI's share value was based on a valuation from an independent valuer, in their report dated 2 October 2017. From 1 January to 20 December 2018, the Company received dividend income from PTFI amounting to US$180,304,500 or equivalent to Rp2,569,263 million (2017: US$31,950,000 or equivalent to Rp427,587 million) and is presented as part of other income, net (Note 37) in the consolidated statement of profit or loss. On 21 December 2018, as disclosed in Note 12, this available-for-sale financial asset was reclassified to Investment in PT Freeport Indonesia.

The fair value of all available-for-sale financial assets is based on the current bid price in active markets and observable inputs other than quoted prices.

The maximum exposure to credit risk at the reporting date is the carrying value of the investments in government bonds, mutual funds and corporate shares classified as available-for-sale financial assets.

As at 31 December 2019, 2018 and 2017, none of these financial assets are either past due or impaired.

11. OTHER CURRENT AND NON-CURRENT ASSETS

	31 December 2019	31 December 2018	31 December 2017
Deposits for investments	368,850	368,850	-
Prepaid expenses and advance payments	340,640	641,923	1,313,543
Assets of disposal group classified as held for sale	296,530	312,834	351,764
Pension plan assets	215,044	178,431	116,130
Performance bonds	187,643	238,064	242,057
Goodwill	170,413	203,836	203,836
Restricted cash	166,705	151,465	35,702
Plantation assets	142,039	199,581	233,102
Real estate	103,870	95,606	90,900
Others (each below Rp100 billion)	177,190	591,742	247,437
Total other current and non-current assets	**2,168,924**	**2,982,332**	**2,834,471**
Less:			
Current portion	**(910,542)**	**(1,050,285)**	**(1,298,103)**
Non-current portion	**1,258,382**	**1,932,047**	**1,536,368**

Advance payments represent down payments to suppliers for purchases of goods and services.

Refer to Note 40ac for details of deposits for investments.

Refer to Note 39 for details of balances with related parties.

(Expressed in millions of Rupiah, unless otherwise stated)

12. INVESTMENT IN PT FREEPORT INDONESIA

	31 December 2019	31 December 2018	31 December 2017
Equity method	18,178,973	19,504,926	-
Not accounted for under equity method	46,537,826	46,091,430	-
Total investment in PTFI	**64,716,799**	**65,596,356**	**-**

	31 December 2019	31 December 2018	31 December 2017
Beginning balance	65,596,356	-	-
Reclassified from available-for-sale investment (Note 10)	-	7,255,450	-
Increase in fair value of the equity interest previously held (Note 37)	-	2,404,970	-
Addition:			
- Equity method	-	9,660,420	-
- Not accounted for under equity method	2,337,678	46,091,430	-
(Charged)/credited to profit or loss:			
Share in net (loss)/profit	(550,755)	184,086	-
Share in other comprehensive income	21,882	-	-
Amortisation of fair value uplift	(25,473)	-	-
Translation	(2,662,889)	-	-
Ending balance	**64,716,799**	**65,596,356**	**-**

On 21 December 2018, the Company entered into a series of transactions as one package as part of the PTFI shares divestment. As disclosed in Note 40c, the Company acquired 100% of PTII's shares from FCX and International Support LLC ("International Support") with a total consideration of US$350,000,000 or equivalent to Rp4,865,350 million (2018: Rp5,068,350 million) to own 9.36% of PTFI shares owned by PTII. The Company considered PTII's business and considered that acquisition of 100% of PTII's shares is an asset acquisition instead of business combination, as disclosed in Note 3.2.e. The Company recorded acquisition of 9.36% of PTFI shares at fair value. Prior to that date, PTII changed its name to IPMM. In these consolidated financial statements, PTII and IPMM are referred to interchangeably.

The Inalum Group has also subscribed to PTFI shares in aggregate amounting to US$3.5 billion or equivalent to Rp48,653,500 million (2018: Rp50,683,500 million) and nominated PTFI to purchase 100% shares in PT Rio Tinto Indonesia ("PTRTI") (refer to Note 40e for PTRTI Buyout Agreement).

PTFI is engaged in the exploration, mining and processing of copper, gold and silver ore in Papua. PTFI and PTRTI have a Participating Agreement, in which PTRTI has the right to a share of production and funding obligation of 40% Participating Interest in the CoW of PTFI. The right and return of production is 40% above "metal strip" until certain production volume and sales threshold and after that 40% for all production.

Inalum Group nominated PTFI as the Purchaser of 100% of PTRTI's shares from the PTRTI Share Seller while the Company and IPMM will have 20.60% and 19.40% of PTFI's new shares, respectively, that were issued by PTFI or 40% shares in total (refer to Note 40d for PTFI Share Subscription Agreement). As agreed previously between the Inalum Group and FCX, all of the rights and obligations of PTRTI in the Participating Agreement have been replicated to the Shareholders Agreement that was signed at the completion of PTII acquisition and PTFI Share Subscription Agreement (the "Transaction"). After the Transaction, the Inalum Group has 51.24% legal ownership in PTFI which consists of prior ownership directly owned by the Company and through IPMM each amounting to 9.36% or owned by the Inalum Group amounting to 18.72%, which was then diluted into 5.62% each or 11.24% in total, and additional new shares owned by the Inalum Group amounting to 40% which consist of 20.60% directly owned by the Company and 19.40% through IPMM.

(Expressed in millions of Rupiah, unless otherwise stated)

12. INVESTMENT IN PT FREEPORT INDONESIA (continued)

As a result of the replication of the Participating Agreement, the Inalum Group will make some payments for the expansion of capital expenditures to PTFI pursuant to the predetermined schedule until 31 December 2022 (the “Initial Period”). During 2019, the Inalum Group has paid contribution of capital expenditure expansion to PTFI amounting to US$164,914,214 or equivalent to Rp2,337,678 million.

Under the Shareholders Agreement between Inalum Group, PTFI and FCX, the dividend distribution of PTFI before the Initial Period ending is allocated based on the percentage of ownership of the legal shareholders of PTFI before the Transactions. This means that Inalum Group's economic ownership for equity method of accounting purposes is recognised at 18.72%. Therefore, the new share subscription in the form of 40% PTFI shares ownership owned by the Inalum Group is not accounted for under equity method until the Initial Period ends.

The Inalum Group has also considered the Heads of Agreement between the GoI, Papua Government and Mimika Regency that was signed on 12 January 2018 as disclosed in Note 40a. Based on the Heads of Agreement, it was agreed by the Papua Government and Mimika Regency to subscribe shares in IPMM (as a Special Purpose Company) through a regional state-owned enterprise (“BUMD”) in order to have 10% effective economic ownership in PTFI.

Until the completion of these consolidated financial statements, the BUMD has not been established. Hence, as at 31 December 2019, IPMM is wholly owned by the Company.

The economic interest of the Inalum Group for 18.72% of the net loss/(profit) of PTFI for the years ended 31 December 2019 and 2018 is loss of Rp550,755 million and profit of Rp184,086 million, respectively.

For the year ended 31 December 2019, no dividend was distributed by PTFI.

For the Inalum Group’s 9.36% share ownership in PTFI before the Transaction (or 5.62% after being diluted), the Inalum Group has made revaluation of the book value of investment in PTFI shares that was already recorded as an available-for-sale investment in the consolidated financial statements to fair value based on the independent appraiser report. The fair value of investment in PTFI for 9.36% portion (before being diluted to 5.62%) was amounting to Rp9,660,420 million. The Group has recorded gain on the fair value adjustment of investment amounting to Rp2,404,970 million as part of other income, net in the 2018 consolidated statement of profit or loss (Note 37).

Set out below is the summarised financial information for PTFI which is accounted for using the equity method:

	31 December 2019	31 December 2018
Summarised statement of financial position		
Current assets	20,592,941	22,135,150
Non-current assets	200,887,772	197,469,708
Total assets	**221,480,713**	**219,604,858**
Current liabilities	14,363,695	16,509,252
Non-current liabilities	63,561,224	53,079,584
Total liabilities	**77,924,919**	**69,588,836**
Net assets	**143,555,794**	**150,016,022**

(Expressed in millions of Rupiah, unless otherwise stated)

12. INVESTMENT IN PT FREEPORT INDONESIA (continued)

	31 December 2019	31 December 2018
Adjustment relating to PTFI Share Subscription Agreement that is not accounted for under equity method of accounting by the Group		
Beginning balance	(50,683,500)	(50,683,500)
Addition	(2,337,678)	-
Translation	1,891,281	-
Ending balance	(51,129,897)	(50,683,500)
Adjusted net assets	**92,425,897**	**99,332,522**
Summarised statement of profit or loss and other comprehensive income		
Revenue	39,202,495	80,492,740
Gross profit	4,566,413	44,223,758
(Loss)/profit before income tax	**(70,560)**	**41,566,972**
Income tax expenses	(2,871,509)	(5,811,805)
(Loss)/profit for the year	**(2,942,069)**	**35,755,167**
Other comprehensive income	116,891	137,584
Total other comprehensive (loss)/income	**(2,825,178)**	**35,892,751**

The reconciliation of the summarised financial information of PTFI presented to the carrying amount of the Group's interest in PTFI is as follows:

	31 December 2019	31 December 2018
Opening adjusted net assets	99,332,522	98,349,159
Total comprehensive (loss)/income	(2,825,178)	983,363
Translation	(4,081,447)	-
Closing adjusted net assets	**92,425,897**	**99,332,522**
Interest in PTFI - carrying value	17,302,128	18,595,048
Fair value uplift	909,878	909,878
Amortisation of fair value uplift	(25,473)	-
Translation	(7,560)	-
Carrying value of investment in PTFI accounted for under equity method	**18,178,973**	**19,504,926**

(Expressed in millions of Rupiah, unless otherwise stated)

13. INVESTMENTS

a. Investments in associates

	31 December 2019	31 December 2018 *)	31 December 2017 *)
PT Nusa Halmahera Mineral ("NHM")	614,256	1,059,629	1,684,568
Other associates	203,730	325,453	314,418
Total investments in associates	**817,986**	**1,385,082**	**1,998,986**

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Beginning balance	5,069,257	5,160,481	5,190,445
Share in net (loss)/profit	(37,886)	67,378	140,510
Other comprehensive (loss)/income	(10,123)	(1,150)	4,906
Dividend distributions	(331,724)	(225,335)	(185,264)
Sale of investments	-	-	(10,820)
Addition of investments	-	51	11,250
Difference in foreign currency translation	(31,638)	67,832	9,454
Ending balance	4,657,886	5,069,257	5,160,481
Accumulated asset amortisation based on fair value			
Beginning balance	(3,349,937)	(2,994,764)	(2,723,145)
Addition	(49,281)	(387,438)	(274,416)
Difference in foreign currency translation	(2,292)	32,265	2,797
Ending balance	(3,401,510)	(3,349,937)	(2,994,764)
Accumulated impairment of investments			
Beginning balance	(334,238)	(166,731)	(91,613)
Impairment losses of investments	(104,152)	(167,507)	(75,118)
Ending balance	(438,390)	(334,238)	(166,731)
Carrying amount of investments	**817,986**	**1,385,082**	**1,998,986**

*) As restated (refer to Note 49)

The nature of investments in associates as at 31 December 2019, 2018 and 2017 is as follows:

1. NHM operates an underground gold mine at North Halmahera Regency, North Maluku Province. The percentage of interest held is 25%.

2. Other associates consist of the Group's investment in PT Asuransi Jiwa Tugu Mandiri, PT Tabalong Prima Resources, PT Mitra Hasrat Bersama, PT Menara Antam Sejahtera, PT Antamloka Halimun Energi, PT Antam Niterra Haltim, PT Nikel Halmahera Timur, PT Meratus Jaya Iron & Steel and PT Koba Tin. No dividend was distributed by these associates for the years ended 31 December 2019, 2018 and 2017.

All of the associates are private companies and no quoted market prices are available for their shares.

(Expressed in millions of Rupiah, unless otherwise stated)

13. INVESTMENTS (continued)

a. Investments in associates (continued)

Set out below is the summarised financial information for NHM, a material associate of the Group:

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Summarised statements of financial position			
Current assets	990,015	2,180,270	1,756,004
Non-current assets	2,638,869	3,070,705	3,972,325
Total assets	**3,628,884**	**5,250,975**	**5,728,329**
Current liabilities	555,387	618,989	587,576
Non-current liabilities	724,451	707,743	807,470
Total liabilities	**1,279,838**	**1,326,732**	**1,395,046**
Net assets	**2,349,046**	**3,924,243**	**4,333,283**
Summarised statements of profit or loss and other comprehensive income			
Revenue	3,547,878	4,076,788	5,342,087
Depreciation and amortisation	(830,687)	(521,181)	(1,574,423)
(Loss)/profit before income tax	**(122,551)**	**315,701**	**839,762**
Income tax expenses	(11,441)	(93,542)	(330,958)
(Loss)/profit for the year	**(133,992)**	**222,159**	**508,804**
Other comprehensive income/(loss)	12,238	(1,187)	1,324
Total other comprehensive (loss)/ income for the year	**(121,754)**	**220,972**	**510,128**
Associate's dividends	(331,724)	(225,335)	(185,264)

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

13. INVESTMENTS (continued)

a. Investments in associates (continued)

The reconciliation of the summarised financial information presented for NHM to the carrying value of the Group's interest in NHM is as follows:

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Opening net assets	**3,924,243**	**4,333,283**	**4,564,209**
Dividends distribution	(1,326,897)	(901,339)	(741,054)
(Loss)/profit for the year	(133,992)	222,159	508,804
Other comprehensive income/(loss)	12,238	(1,187)	1,324
Difference in foreign currency translation	(126,546)	271,327	-
Closing net assets	**2,349,046**	**3,924,243**	**4,333,283**
Interest in associate	587,262	981,061	1,083,321
Fair value uplift	26,994	246,075	676,365
Impairment loss of investment	-	(167,507)	(75,118)
Carrying value	**614,256**	**1,059,629**	**1,684,568**

During the year ended 31 December 2019, the dividend distributed by NHM to Antam was amounting to US$23,350,478 or equivalent to Rp331,724 million (2018: US$16,111,148 or equivalent to Rp225,335 million and 2017: US$13,769,108 or equivalent to Rp185,264 million).

During 2018, Antam received cash dividends amounting to US$15,711,148 or equivalent to Rp219,693 million (2017: US$12,769,108 or equivalent to Rp171,945 million), after NHM had offset the dividends with Antam's contingent liability each amounting to US$400,000 or equivalent to Rp5,642 million and US$1,000,000 or equivalent to Rp13,319 million for the years ended 31 December 2018 and 2017, respectively.

Refer to Note 40j for the contingent purchase price relating to the Group's interest in NHM.

b. Investments in joint ventures

	31 December 2019	31 December 2018 *)	31 December 2017 *)
PT Bukit Pembangkit Innovative ("BPI")	1,920,218	1,862,224	1,274,352
PT Huadian Bukit Asam Power ("HBAP")	988,761	582,219	45,390
PT Bukit Asam Transpacific Railway	5,424	5,424	5,424
ICA	-	-	833,894
Total investments in joint ventures	**2,914,403**	**2,449,867**	**2,159,060**

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

13. INVESTMENTS (continued)

b. Investments in joint ventures (continued)

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Beginning balance	2,449,867	2,159,060	3,097,509
Share in net profit/(loss)	180,487	(884,691)	(987,155)
Other comprehensive (loss)/income	(93,162)	173,636	(21,192)
Addition of investments	378,243	598,950	-
Adjustment of investment to BPI equity	(1,032)	311,058	-
Difference in foreign currency translation	-	60,006	69,898
Adjustment for fair value of previously held equity interest in ICA before business combination	-	14,671	-
Business combination achieved in stages of ICA	-	17,177	-
Ending balance	**2,914,403**	**2,449,867**	**2,159,060**

The nature of the significant investments in joint ventures is as follows:

1. ICA engages in chemical grade alumina processing activities. ICA is the Group's expansion to the chemical grade alumina industry. The percentage of interest held is 80%. Significant decisions related to financial and operating policies of ICA need approval from all shareholders and therefore, Antam does not have unilateral control over ICA. As at 28 December 2018, the Group owned 100% of ICA's shares and therefore, investment in ICA is no longer recorded as investment in joint ventures (refer to Note 5).

2. BPI entered into a power purchase agreement with PT Perusahaan Listrik Negara ("PLN") related to the Mine Mouth Power Plant at Lahat Regency, South Sumatra. The percentage of interest held is 59.75%.

3. HBAP entered into power purchase agreement with PLN related to the Mine Mouth Power Plant South Sumatra 8 at Muara Enim Regency, South Sumatra. As at 31 December 2019, HBAP is still in the development phase. The percentage of interest held is 45%.

All of the joint ventures are private companies and no quoted market prices are available for their shares.

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

13. INVESTMENTS (continued)

b. Investments in joint ventures (continued)

Set out below is the summarised financial information for the material joint ventures of the Group:

	BPI			HBAP			ICA
	31 December 2019	31 December 2018	31 December 2017	31 December 2019	31 December 2018	31 December 2017	31 December 2017 *)
Summarised statements of financial position							
Current assets	385,815	1,202,339	1,074,548	339,934	472,707	24,209	369,079
Non-current assets	5,592,679	5,136,458	4,893,719	5,415,409	878,108	137,421	5,170,801
Total assets	**5,978,494**	**6,338,797**	**5,968,267**	**5,755,343**	**1,350,815**	**161,630**	**5,539,880**
Current liabilities	959,100	2,564,944	1,157,157	216,679	26,227	60,763	1,355,985
Non-current liabilities	1,805,640	657,161	2,113,257	3,341,417	30,767	-	3,141,527
Total liabilities	**2,764,740**	**3,222,105**	**3,270,414**	**3,558,096**	**56,994**	**60,763**	**4,497,512**
Net assets	**3,213,754**	**3,116,692**	**2,697,853**	**2,197,247**	**1,293,821**	**100,867**	**1,042,368**
Summarised statements of profit or loss and other comprehensive income							
Revenue	1,028,875	972,887	880,214	4,850,756	126,322	-	335,159
Depreciation and amortisation	(1,277)	(672)	(811)	-	-	-	(1,571,330)
Finance income	5,311	3,655	640	371,366	-	-	606
Finance costs	(113,272)	(144,392)	(127,499)	(435,629)	(84,744)	(2,141)	(102,961)
Profit/(loss) before income tax	**295,668**	**312,110**	**308,011**	**178,892**	**(133,297)**	**(18,731)**	**(1,338,387)**
Income tax expenses	(93,421)	(139,175)	(103,879)	(46,355)	(1,032)	-	(47,603)
Profit/(loss) for the year	**202,247**	**172,935**	**204,132**	**132,537**	**(134,329)**	**(18,731)**	**(1,385,990)**
Other comprehensive income	4	52	-	-	-	-	1,352
Total comprehensive income/(loss)	**202,251**	**172,987**	**204,132**	**132,537**	**(134,329)**	**(18,731)**	**(1,384,638)**

The reconciliation of the summarised financial information presented to the carrying amount of interests in material joint ventures to the Group is as follows:

	BPI			HBAP			ICA
	31 December 2019	31 December 2018	31 December 2017	31 December 2019	31 December 2018	31 December 2017	31 December 2017 *)
Opening net assets	**3,116,692**	**2,697,853**	**2,570,744**	**1,293,821**	**100,867**	**132,409**	**2,339,635**
Profit/(loss) for the year	202,247	172,935	204,132	132,537	(134,329)	(18,731)	(1,385,990)
Other comprehensive income	4	52	-	-	-	-	1,352
Addition of investment	-	-	-	840,540	1,331,000	-	-
Difference in foreign currency translation	(105,189)	245,852	(77,023)	(69,651)	(3,717)	(12,811)	87,371
Closing net assets	**3,213,754**	**3,116,692**	**2,697,853**	**2,197,247**	**1,293,821**	**100,867**	**1,042,368**
Interest in joint ventures - carrying value	**1,920,218**	**1,862,224**	**1,274,352**	**988,761**	**582,219**	**45,390**	**833,894**

*) As restated (refer to Note 4)

(Expressed in millions of Rupiah, unless otherwise stated)

14. EXPLORATION AND EVALUATION ASSETS

	31 December 2019			
	1 January 2019 *)	Additions	Reclassification and deduction	31 December 2019
Antam	576,018	78,762	(95,495)	559,285
Antam's subsidiaries	130,738	4,833	(36,115)	99,456
Carrying value	**706,756**			**658,741**

	31 December 2018 *)			
	1 January 2018 *)	Additions	Reclassification and deduction	31 December 2018 *)
Antam	574,886	1,132	-	576,018
Antam's subsidiaries	132,826	3,716	(5,804)	130,738
Carrying value	**707,712**			**706,756**

	31 December 2017 *)			
	1 January 2017 *)	Additions	Reclassification and deduction	31 December 2017 *)
Antam	613,011	1,441	(39,566)	574,886
Antam's subsidiaries	164,462	14,600	(46,236)	132,826
Carrying value	**777,473**			**707,712**

As at 31 December 2019 and 2018, Antam's exploration and evaluation assets are mostly at the concession area of Sangaji, Papandayan, Mandiodo, Mempawah, Oksibil, Munggu Pasir, Bahubulu and Cibaliung. Meanwhile, the exploration and evaluation assets of Antam's subsidiaries are mostly at Gag Island, Landak, Meliau and Cibaliung.

As at 31 December 2019, 2018 and 2017, management believes that provision for impairment in the value of the exploration and evaluation assets is not necessary.

15. INVESTMENT PROPERTIES

	1 January 2019	Addition	Reclassification	Fair value adjustments	31 December 2019
Investment properties	1,121,267	-	151,486	226,266	1,499,019
Properties under construction	-	151,486	(151,486)	-	-
Total	**1,121,267**	**151,486**	**-**	**226,266**	**1,499,019**

	1 January 2018	Addition	Disposal	Fair value adjustments	31 December 2018
Investment properties	912,679	615	(615)	208,588	1,121,267
Total	**912,679**	**615**	**(615)**	**208,588**	**1,121,267**

	1 January 2017	Addition	Disposal	Fair value adjustments	31 December 2017
Investment properties	882,707	-	(75,109)	105,081	912,679
Total	**882,707**	**-**	**(75,109)**	**105,081**	**912,679**

The fair value of the investment properties was measured using the sales comparison approach which is classified as fair value level 2 and 3 in the fair value hierarchy, as calculated by qualified independent appraiser.

*) As restated (refer to Note 49)

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16. FIXED ASSETS (continued)

	1 January 2019 *)	Addition	Disposal	Reclassification	Translation	31 December 2019
Cost:						
Direct ownership:						
Land rights	6,932,983	177,021	-	261,385	(237,322)	7,134,067
Structure, buildings, improvements and river channel	21,083,910	218,237	(5,220)	524,342	(567,110)	21,254,159
Plant, machinery and mining equipment	45,430,331	1,143,506	(209,305)	1,503,222	(852,615)	47,015,139
Office, hospital, housing equipment and furniture and fixture	2,122,434	437,940	(48,400)	78,671	(40,345)	2,550,300
Transportation equipment	868,595	45,231	(23,393)	17,355	(10,520)	897,268
Construction-in-progress	6,057,679	2,535,414	(57,802)	(2,384,975)	(54,748)	6,095,568
	82,495,932	4,557,349	(344,120)	-	(1,762,660)	84,946,501
Leased assets:						
Machinery and mining equipment	822,594	169,948	-		-	992,542
Total	**83,318,526**	**4,727,297**	**(344,120)**	**-**	**(1,762,660)**	**85,939,043**
Accumulated depreciation:						
Direct ownership:						
Land rights	(68,432)	(34,576)	-	-	-	(103,008)
Structure, buildings, improvements and river channel	(16,253,107)	(592,413)	1,066	-	498,163	(16,346,291)
Plant, machinery and mining equipment	(25,063,723)	(1,640,279)	188,647	-	555,616	(25,959,739)
Office, hospital, housing equipment and furniture and fixture	(1,300,775)	(351,736)	34,749	-	18,323	(1,599,439)
Transportation equipment	(698,658)	(172,456)	23,393	-	10,937	(836,784)
	(43,384,695)	(2,791,460)	247,855	-	1,083,039	(44,845,261)
Leased assets:						
Machinery and mining equipment	(198,935)	(129,122)	-	-	-	(328,057)
Total	**(43,583,630)**	**(2,920,582)**	**247,855**	**-**	**1,083,039**	**(45,173,318)**
Accumulated impairment loss	(802,580)	(289,846)	-	-	-	(1,092,426)
Total carrying value	**38,932,316**					**39,673,299**

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

16. FIXED ASSETS (continued)

	1 January 2018 *)	Addition	Disposal	Reclassi-fication	Translation	Acquisition	31 December 2018 *)
Cost:							
Direct ownership:							
Land rights	6,507,580	53,626	(615)	730	371,662	-	6,932,983
Structure, buildings, improvements and river channel	19,771,494	83,355	(77,164)	227,406	899,126	179,693	21,083,910
Plant, machinery and mining equipment	38,808,450	789,858	(43,346)	762,653	1,071,283	4,041,433	45,430,331
Office, hospital, housing equipment and furniture and fixture	1,713,671	274,748	(2,834)	66,062	55,449	15,338	2,122,434
Transportation equipment	777,417	97,664	(26,380)	1,901	16,441	1,552	868,595
Construction-in-progress	3,367,805	3,785,392	(95,902)	(1,108,271)	102,027	6,628	6,057,679
	70,946,417	5,084,643	(246,241)	(49,519)	2,515,988	4,244,644	82,495,932
Leased assets:							
Machinery and mining equipment	720,116	49,498	-	52,980	-	-	822,594
Total	**71,666,533**	**5,134,141**	**(246,241)**	**3,461**	**2,515,988**	**4,244,644**	**83,318,526**
Accumulated depreciation:							
Direct ownership:							
Land rights	(50,686)	(17,746)	-	-	-	-	(68,432)
Structure, buildings, improvements and river channel	(15,028,114)	(483,573)	52,272	-	(793,692)	-	(16,253,107)
Plant, machinery and mining equipment	(22,665,205)	(1,532,844)	7,948	-	(873,622)	-	(25,063,723)
Office, hospital, housing equipment and furniture and fixture	(1,150,173)	(124,389)	2,517	-	(28,730)	-	(1,300,775)
Transportation equipment	(577,642)	(165,382)	59,159	-	(14,793)	-	(698,658)
	(39,471,820)	(2,323,934)	121,896	-	(1,710,837)	-	(43,384,695)
Leased assets:							
Machinery and mining equipment	(125,391)	(73,544)	-	-	-	-	(198,935)
Total	**(39,597,211)**	**(2,397,478)**	**121,896**	**-**	**(1,710,837)**	**-**	**(43,583,630)**
Accumulated impairment loss	(731,000)	(71,580)	-	-	-	-	(802,580)
Total carrying value	**31,338,322**						**38,932,316**

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

16. FIXED ASSETS (continued)

	1 January 2017 *)	Addition	Disposal	Reclassification	Translation	31 December 2017 *)
Cost:						
Direct ownership:						
Land rights	1,090,533	5,416,764	-	130	153	6,507,580
Structure, buildings, improvements and river channel	19,143,057	246,744	(33)	274,282	107,444	19,771,494
Plant, machinery and mining equipment	30,558,908	1,533,609	(327,064)	6,920,915	122,082	38,808,450
Office, hospital, housing equipment and furniture and fixture	1,488,931	220,513	(9,865)	8,023	6,069	1,713,671
Transportation equipment	656,108	124,709	(5,799)	580	1,819	777,417
Construction-in-progress	8,158,120	2,417,139	(4,337)	(7,213,809)	10,692	3,367,805
	61,095,657	9,959,478	(347,098)	(9,879)	248,259	70,946,417
Leased assets:						
Machinery and mining equipment	710,237	-	-	9,879	-	720,116
Total	**61,805,894**	**9,959,478**	**(347,098)**	**-**	**248,259**	**71,666,533**
Accumulated depreciation:						
Direct ownership:						
Land rights	(32,995)	(17,691)	-	-	-	(50,686)
Structure, buildings, improvements and river channel	(14,474,831)	(458,756)	32	-	(94,559)	(15,028,114)
Plant, machinery and mining equipment	(21,518,416)	(1,334,787)	291,661	-	(103,663)	(22,665,205)
Office, hospital, housing equipment and furniture and fixture	(996,479)	(158,685)	8,159	-	(3,168)	(1,150,173)
Transportation equipment	(521,189)	(60,384)	5,634	-	(1,703)	(577,642)
	(37,543,910)	(2,030,303)	305,486	-	(203,093)	(39,471,820)
Leased assets:						
Machinery and mining equipment	(53,410)	(71,981)	-	-	-	(125,391)
Total	**(37,597,320)**	**(2,102,284)**	**305,486**	**-**	**(203,093)**	**(39,597,211)**
Accumulated impairment loss	(617,376)	(113,624)	-	-	-	(731,000)
Total carrying value	**23,591,198**					**31,338,322**

The Group has several land rights in the form of land right use and building right titles that will expire at various times and can be extended.

The depreciation of fixed assets for the years ended 31 December 2019, 2018 and 2017 were allocated as follows:

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Cost of revenue	2,596,232	2,088,544	1,879,056
General and administrative expenses and selling expenses	324,350	305,280	220,077
Exploration and evaluation assets, mining properties and construction-in-progress	-	3,654	3,151
Translation adjustment on the financial statements	(1,083,039)	1,710,837	203,093
	1,837,543	**4,108,315**	**2,305,377**

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

16. FIXED ASSETS (continued)

Construction-in-progress represents projects that have not been completed as at the date of the consolidated statement of financial position. Construction-in-progress as at 31 December 2019 mainly comprised the East Halmahera Ferronickel Plant Project in Antam, Project Township - Tanah Putih, Existing DERTI & refurbishment 5 million tons - P3 TEAM, Project Development Tarahan and Project Development OLC Inpit TAL in Bukit Asam and buildings and production equipments in the Company and Timah. Those construction-in-progress have been and are estimated to be completed in 2020 and 2021 with the percentage of completion being between 45.65% - 98%.

Except for land, buildings and structure, management believes that there is no significant difference between the fair value of fixed assets and their carrying value. As at 31 December 2019 and 2018, the fair value of the land and buildings owned by the Group based on the applied tax value or Sales Value of Taxable Object exceeded its net carrying value.

An impairment test on fixed assets is performed when there is an indication that the carrying value of fixed assets may be impaired.

Impairment loss recognised in 2019 amounting to Rp289,846 is based on impairment test performed on fixed assets of ICA where the recoverable amount was determined based on VIU calculation that used a discounted cash flow model, which is classified as fair value level 3 in the fair value hierarchy.

The key assumptions used in the impairment test for fixed assets of ICA as at 31 December 2019 were as follows:

Cash flow period	2020 - 2044
Sales price/ton	US$521 - US$1,610
Discount rate	10.92%

In addition, as at 31 December 2019, there is a decrease in tin metal price which is an indication of impairment in the fixed assets value in Timah. For the purpose of impairment test, Timah's management has determined fixed assets and mining property as one cash generating unit for impairment test.

Timah has performed impairment test where the recoverable amount was determined based on VIU calculation that used a discounted cash flow model, which is classified as fair value level 3 in the fair value hierarchy.

The key assumptions used in the impairment test in Timah as at 31 December 2019 were as follows:

	2019
Cash flow period	Until 2025
Tin metal prices (full amount):	
2020	US$17,000/MT
2021	US$17,306/MT
2022	US$17,654/MT
2023	US$18,009/MT
2024	US$18,371/MT
2025	US$18,740/MT
Discount rate	10.80%

(Expressed in millions of Rupiah, unless otherwise stated)

16. FIXED ASSETS (continued)

Based on the calculation, the recoverable amount is higher than the fixed assets' and other non-financial assets' value as at 31 December 2019, hence management does not record impairment of fixed assets and mining property for the year ended 31 December 2019.

As at 31 December 2019 and 2018, management believes that the provision for impairment in the value of the fixed assets is adequate.

17. MINING PROPERTIES

	Acquisition of mining rights	Mines under development	Mines in production	Total
Carrying value at 1 January 2017 *)	**27,491**	**1,374,431**	**932,527**	**2,334,449**
Addition	-	43,596	33,897	77,493
Transfer	-	(98,136)	55,424	(42,712)
Amortisation	(19,157)	-	(108,502)	(127,659)
Impairment	-	(42,552)	(3,181)	(45,733)
Carrying value at 31 December 2017 *)	**8,334**	**1,277,339**	**910,165**	**2,195,838**
Addition	-	121,731	451,809	573,540
Transfer	-	(10,376)	10,376	-
Amortisation	(8,334)	-	(129,201)	(137,535)
Carrying value at 31 December 2018 *)	**-**	**1,388,694**	**1,243,149**	**2,631,843**
Addition	-	200,733	315,822	516,555
Transfer	-	(58,884)	121,895	63,011
Amortisation	-	(18,157)	(151,778)	(169,935)
Currency differences due to financial statement translation	-	-	(1,046)	(1,046)
Carrying value at 31 December 2019	**-**	**1,512,386**	**1,528,042**	**3,040,428**

18. TAXATION

a. Prepaid taxes

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Current portion			
Corporate income tax			
Article 25	282,608	1,186	81,174
Article 28	178,428	360,109	78,554
	461,036	361,295	159,728
Other taxes			
VAT	2,581,967	1,666,214	992,075
Others	-	19,634	41,753
	2,581,967	1,685,848	1,033,828
Total current portion	**3,043,003**	**2,047,143**	**1,193,556**

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

18. TAXATION (continued)

a. Prepaid taxes (continued)

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Non-current portion			
Corporate income tax			
Article 28	1,134,414	259,835	440,712
Article 25	318,767	401,352	-
	1,453,181	661,187	440,712
Other taxes			
VAT	1,141,605	1,222,190	705,056
Land and Buildings Tax (“PBB”)	120,880	65,339	241,630
Others	5	-	-
	1,262,490	1,287,529	946,686
Total non-current portion	**2,715,671**	**1,948,716**	**1,387,398**

b. Taxes payable

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Corporate income tax			
Article 29	134,224	177,166	667,383
Article 25	4,014	42,273	52,450
	138,238	219,439	719,833
Other taxes			
VAT	135,989	248,332	74,829
Street Lighting Tax (“PPJ”)	81,997	241,234	-
Surface Water Tax (“SWT”)	33,239	-	-
Others	231,831	348,521	254,701
	483,056	838,087	329,530
Total taxes payable	**621,294**	**1,057,526**	**1,049,363**

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

18. TAXATION (continued)

c. Income tax expenses

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Current tax	1,703,348	2,863,166	2,086,909
Deferred tax	501,354	67,529	284,225
Adjustment in respect of prior year:			
- Current tax	36,639	91,108	15,935
- Deferred tax	-	-	87,316
Income tax expenses	**2,241,341**	**3,021,803**	**2,474,385**

The tax on the Group's profit before income tax differs from the theoretical amount that would arise using the tax rate applicable to the profits on the consolidated entities as follows:

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Consolidated profit before income tax	2,268,389	13,891,879	8,247,805
Tax calculated at applicable tax rates	567,097	3,472,970	2,061,951
Income tax effects of:			
- Share in net (profit)/loss from PTFI, associates and joint ventures	120,986	177,402	280,265
- Non-taxable income	(270,106)	(160,877)	(153,261)
- Non-deductible expenses	427,495	396,062	163,666
- Bonds interest expenses	804,762	135,560	-
- Unrecognised deferred tax assets	309,707	34,617	44,274
- Gain from revaluation of investment properties	(56,567)	(52,147)	(26,270)
- Gain from adjustment in fair value of investment	-	(601,243)	-
- Gain on bargain purchase of subsidiary	-	(556,592)	-
- Adjustment in respect of prior year tax expense	36,639	91,108	103,251
- Fiscal losses utilisation/(correction)	110,804	(24,331)	22,132
- Others	190,524	109,274	(21,623)
Income tax expenses	**2,241,341**	**3,021,803**	**2,474,385**

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

18. TAXATION (continued)

c. Income tax expenses

The reconciliation between profit before income tax as shown in profit or loss and the estimated fiscal income of the Company for the years ended 31 December 2019, 2018 and 2017 is as follows:

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Profit before income tax:			
- Consolidated	2,268,389	13,891,879	8,247,805
- Subsidiaries	(4,505,785)	(8,974,987)	(6,200,155)
- Adjustment of consolidation elimination	3,531,845	18,395	-
- The Company	1,294,449	4,935,287	2,047,650
Fiscal adjustments:			
Depreciation of fixed assets	(1,130,563)	(1,132,632)	(1,076,528)
Provision for land remediation	(34,193)	(40,283)	(96,661)
Non-deductible expenses	249,350	794,148	51,420
Bonds interest expenses	3,219,047	542,241	-
Dividend income	(2,853,158)	(2,613,191)	-
Income subject to final tax	(318,819)	(392,450)	(159,449)
Others	(638,058)	742,605	203,618
Estimated taxable (loss)/income of the Company	(211,945)	2,835,725	970,050
Computation of corporate income tax (at 25% tax rate)	-	708,931	242,513
Prepayment of income taxes	128,577	894,804	173,334
Overpayment of corporate income taxes - the Company	(128,577)	(185,873)	-
Overpayment of corporate income taxes:			
- The Company (prior years)	(178,428)	-	(82,940)
- The subsidiaries	(1,607,212)	(836,609)	(517,500)
- Consolidated	(1,914,217)	(1,022,482)	(600,440)
Underpayment of corporate income taxes:			
- The Company	-	41,657	69,179
- The subsidiaries	138,238	177,782	650,654
- Consolidated	138,238	219,439	719,833

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

18. TAXATION (continued)

d. Deferred tax assets/(liabilities)

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Deferred tax assets			
Post-employment benefit obligations	819,498	806,102	1,033,852
Tax loss carry forward	181,335	139,019	154,780
Provision for impairment loss	188,908	185,591	198,853
Provision for environmental reclamation and mine closure	52,186	74,878	86,696
Difference between commercial and tax on net book value of fixed assets	504,536	754,164	1,119,553
Amortisation of mining properties	(15,419)	(962)	(145,649)
Others	240,083	415,722	197,984
Total	**1,971,127**	**2,374,514**	**2,646,069**
Deferred tax liabilities			
Difference between commercial and tax on net book value of plantation	(46,400)	(46,400)	(47,331)
Others	(13,466)	-	-
Total	**(59,866)**	**(46,400)**	**(47,331)**

*) As restated (refer to Note 49)

e. Tax assessment letters

The Company

On 24 April 2018 and 18 April 2017, the Company received Overpayment Tax Assessment Letter ("SKPLB") regarding corporate income tax for fiscal years 2016 and 2015 amounting to US$4,919,935 or equivalent to Rp67,748 million and US$20,457,666 or equivalent to Rp282,214 million, respectively. The Company has received restitution for those tax overpayments.

The accepted tax corrections have been recorded as income tax expenses.

The subsidiaries

In 2019, 2018 and 2017, Antam has received a number of assessment for various tax years. Certain accepted corrections of corporate income taxes have been recorded as part of income tax expenses and certain accepted corrections of other taxes have been recorded as other expenses in profit or loss. Antam is also in the process of tax objection and tax appeals for the remaining certain corrections.

In 2019, 2018 and 2017, Timah received restitution from VAT overpayment for several fiscal years amounting to Rp649,357 million, Rp138,930 million and Rp206,729 million, respectively.

The accepted correction on the VAT has been recorded as other expenses in profit or loss.

(Expressed in millions of Rupiah, unless otherwise stated)

18. TAXATION (continued)

e. Tax assessment letters (continued)

Bukit Asam has PBB disputes for the years 2011-2019 with the tax authorities, i.e., Prabumulih and Lahat Tax Office as a result of the SKPKB and notification of tax due issued. The tax disputes are at various stages, such as objection, appeal or judicial review. Based on these disputes, Bukit Asam has made payments for the PBB underpayments and recorded these payments as expenses in the year payment was made. However, for certain portions of the payments made by Bukit Asam, where Bukit Asam believes that the tax authorities were not supposed to issue the underpayment, the payment has been recorded as part of prepaid taxes. As at 31 December 2019, the remaining total payment made and recorded as part of prepaid taxes was amounting to Rp120,880 million (2018: Rp65,339 million and 2017: Rp241,630 million). The accepted correction on the PBB has been recorded as other expenses in profit or loss.

In connection with the significant tax disputes involving Bukit Asam, on 29 October 2018, the Supreme Court fully granted the judicial review for corporate income tax for the fiscal periods 2009, 2010 and 2012 amounting to Rp121,869 million and rejected the judicial review submitted by the DGT. Bukit Asam asked for a refund of the overpayments amounting to Rp121,869 million. The restitution was fully refunded to Bukit Asam on 30 April 2019.

f. Administration

Under the Taxation Laws of Indonesia, companies which are domiciled in Indonesia calculate and pay tax on the basis of self-assessment. The Directorate General of Taxation may assess or amend tax liabilities within five years of the time when the tax becomes due.

19. OTHER TAX RECEIVABLES

	31 December 2019	31 December 2018	31 December 2017
Payment of SWT appeal	793,365	536,058	536,058

Since 2014, the Company has been in dispute with the Regional Tax and Retribution Management Bureau of North Sumatra Province (“Pemprov Sumut”) concerning the Company’s local tax liability for the usage of surface water by the Company’s Hydroelectric Power Plants (“PLTA”).

The dispute relates to the interpretation of North Sumatera Governor Regulation No. 24 of 2011 on Procedures for the Calculation of the Water Procurement Value, Price of Raw Water and the Base Price of Water for the Determination of SWT in North Sumatra dated 8 April 2011, which sets forth how SWT is to be calculated. The Company believes that, as a state-owned entity, the applicable tax rate should be the same rate that is applicable to PLN, Indonesia’s state-owned electricity supplier, which would equal Rp75/Kwh of electricity generated by the Company’s PLTA. However, according to the Local Tax Assessment Letters (“SKPD”) from the Local Revenue Office (“Dispenda”) Balige, the calculation of the applicable SWT should instead be the industrial rate that is applicable to private sector entities, which is calculated based on the total volume of water used in cubic meters (m3) multiplied by progressive rates of Rp123.4/m3 to Rp144.4/m3 resulting in the SWT for the period of November 2013 to November 2019 amounting to Rp3,276,180 million. The Company has paid the PAP for those periods amounting to Rp141,053 million.

The Company has filed 70 objection letters against the Dispenda Balige’s local tax assessment letters with the Governor of North Sumatra, most of which have been rejected and some of which are still being processed. With respect to the rejected objection letters, the Company has filed 44 appeal letters to the Tax Court of Indonesia.

(Expressed in millions of Rupiah, unless otherwise stated)

19. OTHER TAX RECEIVABLES (continued)

As of 31 December 2019, out of the 44 appeal letters that the Company has filed to the Tax Court of Indonesia, 11 letters were rejected, 13 letters were declared to be inadmissible due to the non-fulfilment of formality requirements by the Tax Court of Indonesia, 14 letters were granted and 6 letters are still being processed. The Company has filed judicial review letters objecting to 24 of the rejected and inadmissible appeal letters, where 19 letters have been granted by the Supreme Court of Indonesia and 5 letters are still being processed. In order to be eligible for submission of such appeal letters, the Company has paid a total of Rp536,058 million to the local government. The Company also has booked interest income from those payments after receiving Supreme Court verdicts in December 2019.

The Company has not received decision for 6 letters that are still in appeal process up to the date of the consolidated financial statements being issued.

As of 31 December 2019, the total amount that is still in dispute with the Dispenda Balige was Rp1,631,445 million.

20. TRADE PAYABLES

	31 December 2019	31 December 2018 *)	31 December 2017
Third parties	3,651,883	2,822,566	1,809,195
Related parties (Note 39)	513,142	1,127,420	715,965
Total trade payables	**4,165,025**	**3,949,986**	**2,525,160**

Trade payables are denominated in the following currencies:

	31 December 2019	31 December 2018 *)	31 December 2017
Rupiah	3,940,402	3,395,962	2,246,169
US Dollar	152,625	276,486	242,910
Other foreign currencies	71,998	277,538	36,081
Total trade payables	**4,165,025**	**3,949,986**	**2,525,160**

21. ACCRUALS

	31 December 2019	31 December 2018 *)	31 December 2017
Mining services	788,351	720,327	402,419
Bonds interest expenses	512,625	542,251	-
Goods and services suppliers	480,075	840,929	136,731
Regional taxes and other government charges	387,075	466,995	490,943
Coal railway services	225,918	217,032	188,992
Construction-in-progress	187,336	461,585	481,004
Raw and subsidiary materials	104,306	29,368	51,190
Other operational accruals	910,571	1,260,579	963,776
Total accruals	**3,596,257**	**4,539,066**	**2,715,055**

Refer to Note 39 for details of balances with related parties.

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

22. SHORT-TERM EMPLOYEE BENEFIT LIABILITIES

	31 December 2019	31 December 2018	31 December 2017
Employee bonus and *tantiem*	1,160,371	1,546,636	921,738
Short-term post-employment benefits (Note 28)	439,820	512,873	342,142
Total short-term employee benefit liabilities	**1,600,191**	**2,059,509**	**1,263,880**

23. SHORT-TERM BANK BORROWINGS

	31 December 2019	31 December 2018	31 December 2017
PT Bank Mandiri (Persero) Tbk ("Mandiri")	3,827,768	2,889,901	2,327,732
MUFG Bank, Ltd. ("MUFG")	1,961,937	1,300,000	1,300,000
PT Bank Central Asia Tbk ("BCA")	1,500,000	500,000	-
PT Bank CIMB Niaga ("CIMB")	1,396,179	600,000	-
PT Bank BTPN Tbk ("BTPN")	556,040	-	-
PT Bank Permata Tbk ("Permata")	500,000	-	-
PT Bank Rakyat Indonesia (Persero) Tbk ("BRI")	250,000	500,000	1,377,884
PT Bank DBS Indonesia ("DBS")	139,010	325,823	100,000
PT Bank Negara Indonesia Tbk ("BNI")	50,000	30,000	4,038
PT Bank Pan Indonesia Tbk ("Panin")	18,000	3,900	6,020
Total short-term bank borrowings	**10,198,934**	**6,149,624**	**5,115,674**

The fair value of short-term bank borrowings approximates their carrying amount, since the maturity of the borrowings are less than one year.

Refer to Note 39 for details of balances with related parties.

The significant information related to short-term bank borrowings as at 31 December 2019 is as follows:

Creditor	Facility type	Facility (full amount)	Maturity period	Annual interest rate
Mandiri	Term loan facility	US$200,000,000	May 2020	2.57%
	Revolving working capital loan	Rp500,000,000,000; Rp1,000,000,000,000; US$25,000,000 and US$60,000,000	June 2020	Ranging from 3.50% to 8.60%
	Supplier financing facility	Rp300,000,000,000	June 2020	8.00%
	Non-cash loan for letter of credit and SKBDN	US$108,000,000	June 2020	-
	Receivable financing	Rp40,000,000,000	October 2020	8.50%
	Bill Purchasing Line	US$50,000,000	May 2020	2.85%
	Non-cash facility	US$100,000,000	May 2020	0.005% - 0.50%
	Foreign exchange agreement	US$30,000,000	June 2020	-
Bank Mandiri (Europe) Ltd.	Receivable financing	US$12,000,000	February 2020	2.75%

(Expressed in millions of Rupiah, unless otherwise stated)

23. SHORT-TERM BANK BORROWINGS (continued)

Creditor	Facility type	Facility (full amount)	Maturity period	Annual interest rate
Bank Mandiri Hongkong Branch	Uncommitted revolving facility for purchase receivables	US$35,000,000	May 2020	LIBOR + 0.85%
PT Bank Syariah Mandiri ("BSM")	Transactional working capital loan	Rp500,000,000,000	May 2020	*Profit sharing*
DBS	Uncommited receivable facility	US$30,000,000	March 2020	LIBOR + 2%
	Uncommitted revolving credit sub-facility	US$10,000,000	March 2020	COF + 1%
CIMB	Revolving working capital loan	Rp1,400,000,000,000 and its equivalent	July 2020	8.25%
Permata	Revolving working capital loan	Rp500,000,000,000	June 2020	8.20%
BNI	Revolving working capital loan	Rp30,000,000,000 and Rp30,000,000,000	December 2020	10.00%
	Non-cash loan facility	US$75,000,000	January 2020	0.10% - 0.80%
	Foreign exchange and derivative line facility	US$750,000	January 2020	-
BRI	Revolving working capital loan	Rp500,000,000,000 and Rp250,000,000,000	November 2020	Ranging from 8.10% to 9.25%
	Term loan facility	US$200,000,000	July 2020	-
	Foreign exchange line facility	US$35,000,000	December 2020	-
	Non-cash credit line	Rp500,000,000,000	December 2020	-
	Import guarantee	Rp300,000,000,000	December 2020	8.50%
	Commercial line facility	US$40,000,000	December 2020	2.85% - 3.00%
MUFG	Working capital loan	Rp1,800,000,000,000	August and September 2020	JIBOR + 1%
	Supply chain financing facilities	Rp300,000,000,000	August 2020	COF + 0.75%
	Term loan facility	US$100,000,000	June 2020	COF + 0.75%
BCA	Money market loan facility	Rp1,500,000,000,000	July 2020	7.70%
	Foreign exchange line facility	US$20,000,000	July 2020	-
	Term loan facility	US$100,000,000	May 2020	-
	Multicredit facility	US$50,000,000	May 2020	-
BTPN	Uncommited omnibus facility	Rp1,000,000,000,000 and its equivalent	November 2020	Rupiah: 7.98% - 8.08% US$: 3.15% - 3.25%
	Credit facility	US$75,000,000	December 2020	COF + applicable margin
Panin	Working capital loan	Rp50,000,000,000	February 2020	LPS + 3%
	Credit facility	Rp20,000,000,000	January 2020	10,00%

As specified by the loan agreement, the Group is required to comply with certain covenants, such as financial ratio covenants.

(Expressed in millions of Rupiah, unless otherwise stated)

23. SHORT-TERM BANK BORROWINGS (continued)

As at 31 December 2019, Timah has breached the financial ratio covenants as required in the borrowing agreements with Mandiri, MUFG, BCA, BTPN, Permata and DBS. Timah has waived through formal waiver letters which were received in December 2019, January, February, March and April 2020.

There is no change in the presentation of short-term bank borrowings in the statement of financial position as at 31 December 2019 as a result of this matter due to the short-term bank borrowings has been presented as short-term liabilities in the consolidated financial statements.

As at 31 December 2018 and 2017, the Group has complied with the covenants in all of the borrowing agreements.

See Note 48b for the information after the reporting period.

24. LONG-TERM BANK BORROWINGS

	31 December 2019		31 December 2018		31 December 2017	
	Carrying amount	Fair value	Carrying amount	Fair value	Carrying amount	Fair value
Mandiri	3,538,964	3,538,964	168	168	570	570
PT Bank Maybank Indonesia Tbk ("Maybank")	1,063,427	1,063,427	1,238,125	1,238,125	1,253,190	1,274,572
BNI	1,031,695	1,031,695	1,189,614	1,189,614	-	-
PT Bank ICBC Indonesia - BCA	711,558	711,558	870,670	870,670	-	-
Japan Bank for International Cooperation ("JBIC")	268,541	268,541	552,699	552,699	-	-
PT Bank UOB Indonesia ("UOB")	148,466	148,466	195,709	195,709	-	-
PT Bank Mizuho Indonesia ("BMI")	127,812	127,812	-	-	203,220	206,032
PT Bank Sumitomo Mitsui Indonesia ("BSMI")	101,789	104,522	176,726	176,726	231,600	238,201
PT Sarana Multi Infrastructure ("SMI")	65,680	65,680	-	-		
Sumitomo Mitsui Trust Bank Ltd. ("Sumitomo")	53,708	53,708	110,540	110,540	-	-
BRI	14,008	14,008	18,800	18,800	-	-
PT Bank BNI Syariah ("BNI Syariah")	8,118	8,118	-	-		
BSM	2,877	2,877	48,540	48,225	68,232	68,232
Lembaga Pembiayaan Ekspor Indonesia ("LPEI")	-	-	1,549,920	1,574,624	1,566,487	1,596,876
Industrial and Commercial Bank of China Ltd. ("ICBC")	-	-	433,977	440,895	438,617	447,125
Mizuho Bank Ltd ("Mizuho")	-	-	257,926	257,926	-	-
PT Bank Muamalat Tbk ("Muamalat")	-	-	-	-	58,009	58,009
Total	7,136,643	7,139,376	6,643,414	6,674,721	3,819,925	3,889,617
Upfront fees	(21,792)		(6,679)		(6,659)	
Total long-term bank borrowings	**7,114,851**		**6,636,735**		**3,813,266**	
Less:						
Current portion	**(1,806,559)**		**(1,153,506)**		**(576,984)**	
Non-current portion	**5,308,292**		**5,483,229**		**3,236,282**	

The fair values of the loans from BSMI, LPEI and ICBC are based on discounted cash flows using a borrowing rate of 3.91% (2018: 4.81% and 2017: 5.25%) and are within level 3 of the fair value hierarchy. The carrying amounts and fair values are the same for other loans.

Refer to Note 39 for details of balances with related parties.

(Expressed in millions of Rupiah, unless otherwise stated)

24. LONG-TERM BANK BORROWINGS

Significant information related to long-term bank borrowings as at 31 December 2019 is as follows:

Creditor	Facility type	Facility (full amount)	Maturity period	Annual interest rate
BSMI	Investment loan	US$34,244,778	June 2021	4.56%
Maybank	Working capital expenditure	US$100,000,000	June 2025	LIBOR 3M + 2%
PT Bank ICBC Indonesia - BCA	Syndicated loan	US$65,000,000	February 2021	LIBOR 3M + 1.79%
BNI	Investment loan	US$82,000,000	December 2025	LIBOR 3M + 2%
	Investment loan	Rp5,800,000,000	September 2022	12.50%
Mizuho	Commercial facility	JPY7,371,000,000	December 2020	JPY-LIBOR-BBA + 1.1%
Sumitomo	Commercial facility	JPY3,159,000,000	December 2020	JPY-LIBOR-BBA + 1.1%
JBIC	Commercial facility	JPY15,795,000,000	December 2020	Base rate + 1.35%
Mandiri	Credit facility	US$129,666,666	June 2024	LIBOR 3M + 1.73%
	Term loan credit	US$167,000,000	June 2026	LIBOR 3M + 1.92%
BNI Syariah	Investment credit	Rp8,400,000,000 and Rp1,600,000,000	October 2024	Profit sharing Rp4,348,000,000 and Rp828,000,000
UOB	Investment credit facility	Rp212,601,000,000	November 2020	COF + 3%
BRI	Credit loan facility	Rp16,800,000,000	July 2023	9.95%
	Investment credit facility	Rp2,000,000,000	January 2022	12.50%
BSM	Refinancing loan	Rp3,200,000,000	April 2024	Profit sharing Rp1,095,000,000
SMI	Investment loan	Rp117,967,000,000	November 2025	JIBOR + 3.978%

As specified by the loan agreement, the Group is required to comply with certain covenants, such as financial ratio covenants.

As at 31 December 2019, 2018 and 2017, the Group has complied with the covenants in all of the borrowing agreements, except for covenants under agreement with SMI. The Group has breached the financial covenant ratio at 31 December 2019. Therefore, all outstanding loan from SMI has been presented as short-term liabilities in the statement of financial position as at 31 December 2019. The Group is in the process to obtain waiver letter from SMI up to the date of these consolidated financial statements.

25. FINANCE LEASE LIABILITIES

	31 December 2019	31 December 2018	31 December 2017
PT Komatsu Astra Finance	264,343	453,389	609,641
PT Mitsubishi UFJ Finance Group	117,272	60,034	28,845
Others	88,889	-	-
Total finance lease liabilities	**470,504**	**513,423**	**638,486**
Less:			
Current portion	**(170,611)**	**(286,563)**	**(141,874)**
Non-current portion	**299,893**	**226,860**	**496,612**

(Expressed in millions of Rupiah, unless otherwise stated)

25. FINANCE LEASE LIABILITIES (continued)

The future minimum lease payments under finance leases, together with the present value of the minimum lease payments, are as follows:

	31 December 2019	31 December 2018	31 December 2017
Gross finance lease liabilities - minimum lease payments			
No later than one year	196,603	300,891	148,968
Later than one year and no later than five years	334,697	258,740	546,982
	531,300	559,631	695,950
Less : Future finance costs on finance leases	(60,796)	(46,208)	(57,464)
Present value of finance lease liabilities	**470,504**	**513,423**	**638,486**

The maturity analysis of the present value of finance lease liabilities is as follows:

	31 December 2019	31 December 2018	31 December 2017
No later than one year	170,611	286,563	141,874
Later than one year and no later than five years	299,893	226,860	496,612
Total	**470,504**	**513,423**	**638,486**

No significant restrictions were imposed by the lease arrangements between the lessor and the Group on the use of the assets or maintenance of certain financial performances.

26. BONDS PAYABLE

	31 December 2019		31 December 2018		31 December 2017	
	Carrying amount	Fair value	Carrying amount	Fair value	Carrying amount	Fair value
Principal:						
Bonds:						
- The Company	55,604,000	64,308,076	57,924,000	59,621,535	-	-
- Antam	2,100,000	2,121,420	2,100,000	2,039,100	3,000,000	3,022,536
- Timah	2,080,000	2,085,285	1,200,000	1,166,726	1,200,000	1,219,171
Sukuk ijarah:						
- Timah	613,000	613,839	300,000	290,263	300,000	304,791
Total	60,397,000	69,128,620	61,524,000	63,117,624	4,500,000	4,546,498
Discount and unamortised bonds issuance cost	(1,507,909)		(1,716,283)		(3,159)	
Total bonds payable	**58,889,091**		**59,807,717**		**4,496,841**	
Less: **Current portion**	**(600,000)**		**-**		**(899,594)**	
Non-current portion	**58,289,091**		**59,807,717**		**3,597,247**	

(Expressed in millions of Rupiah, unless otherwise stated)

26. BONDS PAYABLE (continued)

Issuer and series	Coupon and return rate	Maturity period	Interest payment due	Rating	Principal amount (full amount)
The Company					
The 2021 Notes	5.23%	15 November 2021	15 May and 15 November	Baa2 (Moody's), BBB- (Fitch)	US$1,000,000,000
The 2023 Notes	5.71%	15 November 2023	15 May and 15 November	Baa2 (Moody's), BBB- (Fitch)	US$1,250,000,000
The 2028 Notes	6.53%	15 November 2028	15 May and 15 November	Baa2 (Moody's), BBB- (Fitch)	US$1,000,000,000
The 2048 Notes	6.76%	15 November 2048	15 May and 15 November	Baa2 (Moody's), BBB- (Fitch)	US$750,000,000
Antam					
Bond Series B	9.05%	14 December 2021	14 March, 14 June, 14 September and 14 December	idA- (Pefindo)	Rp2,100,000,000,000
Timah					
Bond Series A - phase I	8.50%	28 September 2020	28 March, 28 June, 28 September and 28 December	idA+ (Pefindo)	Rp480,000,000,000
Bond Series A - phase II	8.50%	15 August 2022	16 February, 16 May, 16 August and 16 November	idA+ (Pefindo)	Rp387,000,000,000
Bond Series B - phase I	8.75%	28 September 2022	28 March, 28 June, 28 September and 28 December	idA+ (Pefindo)	Rp720,000,000,000
Bond Series B - phase II	8.75%	15 August 2024	16 February, 16 May, 16 August and 16 November	idA+ (Pefindo)	Rp493,000,000,000
Sukuk ijarah Series A	Rp10,200 per year	28 September 2020	28 March, 28 June, 28 September and 28 December	idA+ (Pefindo)	Rp120,000,000,000
Sukuk ijarah Series B	Rp15,750 per year	28 September 2022	28 March, 28 June, 28 September and 28 December	idA+ (Pefindo)	Rp180,000,000,000
Sukuk ijarah - phase II	Rp27,387 per year	15 August 2024	16 February, 16 May, 16 August and 16 November	idA+ (Pefindo)	Rp313,000,000,000

The fair values of the Group's bonds and sukuk ijarah are based on the prices released by the Indonesia Bond Pricing Agency which are within level 2 of the fair value hierarchy.

The Company

On 15 November 2018, the Company issued the bonds through listing on Singapore Exchange Securities Trading Ltd., with the Bank of New York Mellon ("BNY Mellon") acting as the Trustee. BNY Mellon is not affiliated with the Group, either directly or indirectly.

The bonds proceeds, after deduction of fees and commissions and expenses incurred in connection with this bonds issuance, were used to fund the purchase of shares in PTFI pursuant to PTFI Divestment Agreement. The Company completed the transaction of purchase of shares in PTFI on 21 December 2018 (see Note 40c).

During the terms of the bonds, the Company is required to fulfill certain covenants such as the Company will not create or permit to exist, and the Company will ensure that none of its material subsidiaries will create or permit to exist, any lien for the benefit of the holders of any securities on the whole or any part of its property or assets, present or future; the GoI should directly own and control at least 75.00% of the issued and paid-up shares of the issuer; provision of financial statement and other report; and etc.

(Expressed in millions of Rupiah, unless otherwise stated)

26. BONDS PAYABLE (continued)

Antam

On 2 December 2011, Antam issued the bonds through listing on PT Bursa Efek Indonesia ("IDX"), with Permata as the Trustee. Permata is not affiliated with the Group, either directly or indirectly.

The bonds proceeds are used for a routine investment in Antam's business units, renovation and modernisation of the ferronickel plant in Pomalaa and for the opening of nickel mines in North Maluku, Southeast Sulawesi and/or a bauxite mine in West Kalimantan.

During the term of the bonds, Antam has the obligation to, among other things, meet certain financial ratios under the Trusteeship Agreement and maintain the direct and/or indirect shareholding in Antam by the GoI at no less than 51% of the number of shares that have been issued and fully paid. Antam will not conduct a merger or acquisition with another company that does not comply with the intentions and purposes of the Company's Articles of Association, unless this is required by applicable regulations or court decisions and will not reduce its authorised capital, issued capital and paid-in capital; pledge assets and provide loans or guarantees to third parties without the written consent of the Trustee.

On 14 December 2018, Antam has fully repaid the Series A bond with a principal amount of Rp900,000 million.

Timah

On 28 September 2017 and 13 August 2019, Timah issued bonds and sukuk ijarah through listing on IDX, with BNI acting as the Trustee.

The bonds proceeds are used for Timah's capital expenditures and the partial refinancing of the short-term loan from the Working Capital Credit Facility in Rupiah. The sukuk ijarah proceeds are used for the reconditioning of production equipment.

During the term of the bonds and sukuk ijarah, Timah has the obligation to, among other things, meet certain financial ratios under the Trusteeship Agreement, repurchase the bonds following a change of control, limitation of liens, limitations of sale and lease back transactions and provision of financial statements and other reports. Bonds and sukuk ijarah are not secured by special collateral, but are collateralised by all of Timah's assets, either movable or immovable, whether they currently exist or which will exist in the future, for the holders of the bonds and sukuk ijarah.

No later than 1 (one) year after the allotment date, Timah may repurchase the obligation at market price.

As at 31 December 2019, 2018 and 2017, management believes that all of the Group's bonds and sukuk ijarah has complied with all of the covenants.

27. PROVISION FOR ENVIRONMENTAL RECLAMATION AND MINE CLOSURE

	31 December 2019	31 December 2018	31 December 2017
Beginning balance	1,254,988	889,378	942,111
Addition and changes in assumptions	738,284	503,560	142,231
Utilisation/realisation	(203,079)	(137,950)	(194,964)
Ending balance	1,790,193	1,254,988	889,378
Less:			
Current portion	**(197,161)**	**(185,963)**	**(313,299)**
Non-current portion	**1,593,032**	**1,069,025**	**576,079**

(Expressed in millions of Rupiah, unless otherwise stated)

27. PROVISION FOR ENVIRONMENTAL RECLAMATION AND MINE CLOSURE (continued)

At each reporting date, the Group updates the provision for environmental and reclamation cost to reflect the most recent disturbed area.

The key assumptions used in determining the provision for environmental and reclamation costs was as follows:

	31 December 2019	31 December 2018	31 December 2017
Inflation rate	3.30% - 5.00%	2.78% - 5.00%	2.85% - 5.00%
Discount rate	5.41% - 7.78%	5.96% - 8.70%	5.06% - 8.80%

Management believes that the provision is adequate for complying with the regulations.

28. POST-EMPLOYMENT BENEFIT OBLIGATIONS

The pension and other post-retirement obligations as at 31 December 2019, 2018 and 2017 were calculated by an independent actuary.

The principal actuarial assumptions used by the actuaries in determining the pension and other post-retirement obligations were as follows:

	31 December 2019	31 December 2018	31 December 2017
Annual mortality table - active employees	TMI 3 (2011) and TMI 4 (2019)	TMI 3 (2011)	TMI 3 (2011)
Annual mortality table - pensioners	Group Annuity Mortality 1971	Group Annuity Mortality 1971	Group Annuity Mortality 1971
Expected return on plan assets	7.50% - 8.50%	8.50% - 9.50%	8.46% - 9.50%
Normal retirement age	55-56 years	55-56 years	55-56 years
Medical cost trend rates	5.20% - 10.00%	4.60% - 10.00%	4.50% - 6.00%
Discount rates:			
- Pension benefits	6.84% - 8.00%	8.14% - 8.90%	6.56% - 7.32%
- Post-employment medical benefits	7.82% - 8.00%	6.00% - 8.15%	6.56% - 7.16%
- Other post-retirement benefits	7.67% - 8.00%	8.27%	7.08% - 7.16%
- Other long-term employment benefits	7.67% - 8.45%	8.15% - 8.45%	6.56% - 7.57%
Future salary increases:			
- Pension benefits	4.00% - 10.00%	4.00% - 10.00%	4.00% - 10.00%

The details of the employee benefit obligations are as follows:

	31 December 2019	31 December 2018	31 December 2017
Pension benefits	849,793	901,124	982,844
Post-employment medical benefits	2,018,494	1,796,286	2,652,958
Other post-retirement benefits	757,983	734,096	711,451
Other long-term employment benefits	164,304	164,743	149,239
Total	**3,790,574**	**3,596,249**	**4,496,492**
Less:			
Current portion (Note 22)	**(439,820)**	**(512,873)**	**(342,142)**
Non-current portion	**3,350,754**	**3,083,376**	**4,154,350**

(Expressed in millions of Rupiah, unless otherwise stated)

28. POST-EMPLOYMENT BENEFIT OBLIGATIONS (continued)

a. Pension benefits

The Group has two separate pension funds consisting of Dana Pensiun Bukit Asam ("DPBA") and Dana Pensiun Antam ("DP Antam") which were established in 2013 and 1997, respectively.

The movement of pension benefit obligations are as follows:

	Present value of obligation	Fair value of plan assets	Unrecognised surplus on plan assets	Total
As at 1 January 2017	2,252,244	(1,868,391)	189,584	573,437
Recognised in profit or loss:				
- Current service cost	69,147	-	-	69,147
- Past service cost	(4,512)	-	-	(4,512)
- Interest cost/(income)	178,922	(150,792)	-	28,130
	243,557	(150,792)	-	92,765
Remeasurement recognised as other comprehensive income:				
- Changes in financial assumptions	79,306	(57,966)	-	21,340
- Experience adjustment	144,130	-	-	144,130
- Return on plan assets	(20,324)	162,579	-	142,255
- Changes in assets ceiling	-	-	63,762	63,762
	203,112	104,613	63,762	371,487
Contributions paid by:				
- The Group	-	(23,530)	-	(23,530)
- Employees	-	(4,176)	-	(4,176)
	-	(27,706)	-	(27,706)
Benefit paid by:				
- The Group	(26,796)	-	-	(26,796)
- Plan assets	(100,327)	99,984	-	(343)
	(127,123)	99,984	-	(27,139)
As at 31 December 2017	2,571,790	(1,842,292)	253,346	982,844
Recognised in profit or loss:				
- Current service cost	84,891	-	-	84,891
- Past service cost	(2,053)	-	-	(2,053)
- Interest cost/(income)	178,405	(138,252)	-	40,153
	261,243	(138,252)	-	122,991
Remeasurement recognised as other comprehensive income:				
- Changes in financial assumptions	(33,760)	74,468	-	40,708
- Experience adjustment	29,159	-	-	29,159
- Return on plan assets	(25,568)	168,061	-	142,493
- Changes in assets ceiling	-	-	(66,985)	(66,985)
	(30,169)	242,529	(66,985)	145,375
Contributions paid by:				
- The Group	-	(328,807)	-	(328,807)
- Employees	-	(3,936)	-	(3,936)
		(332,743)	-	(332,743)
Benefit paid by:				
- The Group	(67,461)	66,213	-	(1,248)
- Plan assets	(57,758)	37,967	-	(19,791)
	(125,219)	104,180	-	(21,039)
Acquisition of a subsidiary	3,696	-	-	3,696
As at 31 December 2018	2,681,341	(1,966,578)	186,361	901,124

(Expressed in millions of Rupiah, unless otherwise stated)

28. POST-EMPLOYMENT BENEFIT OBLIGATIONS (continued)

a. Pension benefits (continued)

	Present value of obligation	Fair value of plan assets	Unrecognised surplus on plan assets	Total
As at 31 December 2018	**2,681,341**	**(1,966,578)**	**186,361**	**901,124**
Recognised in profit or loss:				
- Current service cost	68,086	-	-	68,086
- Past service cost	1,577	-	-	1,577
- Liability assumed due to recognition of past services	64	-	-	64
- Interest cost/(income)	215,045	(175,907)	-	39,138
	284,772	(175,907)	-	108,865
Remeasurement recognised as other comprehensive income:				
- Changes in financial assumptions	106,645	65,384	-	172,029
- Changes in demographic assumptions	5,422	-	-	5,422
- Experience adjustment	119,900	-	-	119,900
- Foreign exchange impact	(34)	-	-	(34)
- Adjustment	(2,185)	-	-	(2,185)
- Return on plan assets	3,448	12,970	-	16,418
- Changes in assets ceiling	-	-	(102,391)	(102,391)
	233,196	78,354	(102,391)	209,159
Contributions paid by:				
- The Group	-	(339,016)	-	(339,016)
- Employees	-	(3,579)	-	(3,579)
	-	(342,595)	-	(342,595)
Benefit paid by:				
- The Group	(2,461)	-	-	(2,461)
- Plan assets	(139,388)	115,089	-	(24,299)
	(141,849)	115,089	-	(26,760)
As at 31 December 2019	**3,057,460**	**(2,291,637)**	**83,970**	**849,793**

(Expressed in millions of Rupiah, unless otherwise stated)

28. POST-EMPLOYMENT BENEFIT OBLIGATIONS (continued)

b. Post-employment medical benefits

The movement of post-employment medical benefit obligations are as follows:

	Present value of obligation	Fair value of plan assets	Unrecognised surplus on plan assets	Total
As at 1 January 2017	**2,878,160**	**(1,151,967)**	**196,237**	**1,922,430**
Recognised in profit or loss:				
- Current service cost	41,906	-	-	41,906
- Interest cost/(income)	214,279	(99,038)	-	115,241
	256,185	(99,038)	-	157,147
Remeasurement recognised as other comprehensive income:				
- Changes in financial assumptions	796,158	29,158	(165,224)	660,092
- Experience adjustment	(44,130)	-	-	(44,130)
	752,028	29,158	(165,224)	615,962
Contributions paid by:				
- The Group	-	(2,314)	-	(2,314)
- Employees	-	(1,157)	-	(1,157)
	-	(3,471)	-	(3,471)
Benefit paid by:				
- The Group	(39,110)	-	-	(39,110)
- Plan assets	(68,267)	68,267	-	-
	(107,377)	68,267	-	(39,110)
As at 31 December 2017	**3,778,996**	**(1,157,051)**	**31,013**	**2,652,958**
Recognised in profit or loss:				
- Current service cost	31,915	-	-	31,915
- Interest cost/(income)	249,751	(82,282)	-	167,469
	281,666	(82,282)	-	199,384
Remeasurement recognised as other comprehensive income:				
- Changes in financial assumptions	(551,796)	75,756	25,626	(450,414)
- Return on plan assets	(2,954)	-	-	(2,954)
- Experience adjustment	(555,760)	-	-	(555,760)
	(1,110,510)	75,756	25,626	(1,009,128)
Contributions paid by:				
- The Group	-	(2,163)	-	(2,163)
- Employees	-	(1,082)	-	(1,082)
	-	(3,245)	-	(3,245)
Benefit paid by:				
- The Group	(39,590)	-	-	(39,590)
- Plan assets	(73,301)	69,208	-	(4,093)
	(112,891)	69,208	-	(43,683)
As at 31 December 2018	**2,837,261**	**(1,097,614)**	**56,639**	**1,796,286**

(Expressed in millions of Rupiah, unless otherwise stated)

28. POST-EMPLOYMENT BENEFIT OBLIGATIONS (continued)

b. Post-employment medical benefits (continued)

	Present value of obligation	Fair value of plan assets	Unrecognised surplus on plan assets	Total
As at 31 December 2018	**2,837,261**	**(1,097,614)**	**56,639**	**1,796,286**
Recognised in profit or loss:				
- Current service cost	44,552	-	-	44,552
- Interest cost/(income)	231,284	(94,911)	-	136,373
	275,836	(94,911)	-	180,925
Remeasurement recognised as other comprehensive income:				
- Changes in financial assumptions	387,536	45,129	(56,639)	376,026
- Changes in demographic assumptions	75,691	-	-	75,691
- Experience adjustment	(364,074)			(364,074)
- Adjustment	(1,319)	-	-	(1,319)
- Return on plan assets	687	-	-	687
	98,521	45,129	(56,639)	87,011
Contributions paid by:				
- The Group	-	(2,297)	-	(2,297)
- Employees	-	(1,147)	-	(1,147)
	-	(3,444)	-	(3,444)
Benefit paid by:				
- The Group	(42,284)	-	-	(42,284)
- Plan assets	(65,832)	65,832	-	-
	(108,116)	65,832	-	(42,284)
As at 31 December 2019	**3,103,502**	**(1,085,008)**	**-**	**2,018,494**

(Expressed in millions of Rupiah, unless otherwise stated)

28. POST-EMPLOYMENT BENEFIT OBLIGATIONS (continued)

c. Other post-retirement benefits

The movement of other post-retirement benefit obligations are as follows:

	31 December 2019	31 December 2018	31 December 2017
Beginning balance	734,096	711,451	681,245
Recognised in profit or loss:			
- Current service cost	46,808	51,404	30,005
- Past service (benefit)/cost	(14,307)	24,625	(278)
- Interest cost	57,495	46,029	48,469
	89,996	122,058	78,196
Remeasurement recognised as other comprehensive income:			
- Changes in financial assumptions	21,973	(25,668)	17,856
- Changes in demographic assumptions	(2,473)	-	-
- Experience adjustment	5,051	3,976	-
	24,551	(21,692)	17,856
Contributions paid by:			
- Employees	-	-	(18,412)
Benefit paid by:			
- The Group	(90,660)	(77,721)	(47,434)
Ending balance	**757,983**	**734,096**	**711,451**

d. Other long-term employment benefits

The movement of other long-term employment benefits are as follows:

	31 December 2019	31 December 2018	31 December 2017
Beginning balance	164,743	149,239	99,687
Recognised in profit or loss:			
- Current service cost	15,055	37,803	24,867
- Liability assumed due to recognition of past services	3	-	-
- Interest expense	13,546	18,272	62,390
- Change in financial assumptions	(1,810)	(9,997)	-
- Change in demographic assumptions	947	-	-
- Experience adjustment	(11,440)	3,145	151
	16,301	49,223	87,408
Benefit payments	(16,740)	(33,719)	(37,856)
Ending balance	**164,304**	**164,743**	**149,239**

(Expressed in millions of Rupiah, unless otherwise stated)

28. POST-EMPLOYMENT BENEFIT OBLIGATIONS (continued)

e. Plan assets information

The composition of the fair value of plan assets is as follows:

	Pension benefits			Post-employment medical benefits		
	31 December 2019	31 December 2018	31 December 2017	31 December 2019	31 December 2018	31 December 2017
Debt instruments	31%	27%	30%	45%	35%	36%
Property	24%	28%	30%	-	-	-
Equity instruments	14%	8%	14%	16%	8%	4%
Mutual funds	6%	17%	14%	26%	20%	31%
Others	25%	20%	12%	13%	37%	29%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

f. Other information

The sensitivity analysis is based on a change in an assumption while holding all other assumptions constant. In practice, this is unlikely to occur, changes in some of the assumptions may be correlated. The sensitivity is calculated using the same method (projected unit credit).

		Impact on overall liability of change in assumptions					
		31 December 2019		31 December 2018		31 December 2017	
Assumption	**Programme**	**Increase by 1%**	**Decrease by 1%**	**Increase by 1%**	**Decrease by 1%**	**Increase by 1%**	**Decrease by 1%**
Discount rate	Pension benefits	(62,284)	78,742	(55,697)	96,183	(46,720)	52,485
	Post-employment medical benefits	(349,839)	436,422	(289,752)	346,841	(446,974)	567,551
	Other post-retirement benefits	(45,995)	51,957	(35,359)	42,460	(16,649)	18,704
	Other long-term employment benefits	(3,608)	4,167	(8,679)	9,008	(23,580)	27,264
Future salary increase	Pension benefits	79,116	(62,382)	68,801	(55,591)	51,316	(46,930)
Health cost rate increase	Post-employment medical benefits	476,468	(388,097)	307,073	(265,624)	625,953	(493,061)

The expected maturity analysis of undiscounted pension benefits, post-employment medical benefits, other post-retirement benefits and other long-term employment benefits is as follows:

	Less than a year	**Between 1 - 5 years**	**More than 5 years**
Pension benefits	434,959	723,700	4,633,901
Post-employment medical benefits	309,163	512,794	5,355,825
Other post-retirement benefits	155,338	305,023	3,354,753
Other long-term employment benefits	57,967	105,924	939,045

(Expressed in millions of Rupiah, unless otherwise stated)

29. OTHER LIABILITIES

	31 December 2019	31 December 2018	31 December 2017
Loan from investor for mining cooperation project	368,850	368,850	-
Advances from customers	272,537	317,082	115,295
Administrative fine	161,143	-	-
Others (each below Rp100 billion)	392,764	548,394	413,376
Total other liabilities	**1,195,294**	**1,234,326**	**528,671**
Less:			
Current portion	**(1,188,378)**	**(1,216,146)**	**(524,909)**
Non-current portion	**6,916**	**18,180**	**3,762**

Refer to Note 40ac for explanation of the loan from investor for mining cooperation project.

30. SHARE CAPITAL

The Company's sole shareholder as at 31 December 2019, 2018 and 2017 is the GoI.

As at 31 December 2019, 2018 and 2017, the Company's share capital is Rp216,711,765 million which was divided into 522,197,024 shares with a par value of Rp415,000 and with 130,549,256 shares or amounting to Rp54,177,941 million issued and fully paid by the GoI after the Company changed the Articles of Association which have been notarised under Notarial Deed No. 59 dated 27 November 2017 of Notary Liestiani Wang, S.H., M.Kn. as follows:

1) Approving the increase in the Company's share capital from Rp381,998 million to Rp216,711,765 million with par value of Rp415,000.

2) Approving the issuance/placement of portepel shares totalling 129,628,780 shares, with par value of Rp415,000 and with total value of Rp53,795,943 million which has been taken by the GoI.

3) Approving additional state equity participation in the Company's share capital amounting to Rp53,795,943 million through the following:

    a) Transferring the Series B shares owned by the GoI on 65% of Antam amounting to Rp16,902,338 million, 65% of Timah amounting to Rp6,241,547 million, 65.02% of Bukit Asam amounting to Rp18,347,366 million, respectively, and 9.36% of the shares owned by the GoI in PTFI amounting to Rp7,255,450 million.

    b) Of Rp5,049,242 million from the State Budget Year 2016 in the form of land assets of Otorita Pengembangan Proyek Asahan of 1,211.10 Ha in accordance with GR 76/2016.

    c) Of Rp233,156 from the capitalisation of the Company's retained earnings.

(Expressed in millions of Rupiah, unless otherwise stated)

31. REVENUE

	31 December 2019	31 December 2018	31 December 2017
Products:			
Gold	22,465,765	16,693,421	7,375,497
Coal	21,420,040	20,792,659	19,133,457
Tin metal and tin solder	18,107,536	10,152,921	8,481,705
Aluminium	6,910,210	7,802,337	5,744,335
Ferronickel	4,871,431	4,662,079	3,222,630
Nickel ore	3,779,977	3,013,421	1,369,762
Others	2,370,087	1,315,438	1,381,550
	79,925,046	64,432,276	46,708,936
Services:			
Purification of precious metals and other services	703,616	845,153	475,347
Total revenue	**80,628,662**	**65,277,429**	**47,184,283**

The details of the revenue based on the customer's geographical location are as follows:

	31 December 2019	31 December 2018	31 December 2017
Local			
- Third parties	19,404,262	23,024,542	11,038,318
- Related parties (Note 39)	12,564,400	10,717,601	11,062,318
Exports - third parties	48,660,000	31,535,286	25,083,647
Total revenue	**80,628,662**	**65,277,429**	**47,184,283**

(Expressed in millions of Rupiah, unless otherwise stated)

32. COST OF REVENUE

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Production costs:			
Purchases of precious metals	21,573,083	15,272,677	6,202,683
Raw material used	18,644,487	11,277,299	7,860,848
Transportation, barging and ore mining fees	9,101,763	8,158,753	6,779,402
Third-party services	3,615,943	1,058,350	447,990
Salaries, wages, bonuses and employee benefits	3,166,462	3,278,107	2,895,032
Usage of fuel	2,936,324	3,028,215	1,870,081
Depreciation and amortisation	2,797,295	2,236,864	1,965,036
Royalties, taxes and other government charges	2,785,037	2,141,452	1,962,071
Rent	998,805	859,600	681,695
Spare parts used	915,896	659,364	754,032
Maintenances and repairs	488,484	589,367	420,980
Loss on impairment of alumina plant	280,260	-	-
Environmental reclamation and mine closure	177,002	77,134	141,305
Insurance	154,231	95,237	237,167
Others (each below Rp100 billion)	707,501	1,244,509	1,003,798
	68,342,573	49,976,928	33,222,120
Work-in-progress:			
At the beginning of the year	3,217,644	2,309,853	1,962,679
Transferred to fixed assets	(89,932)	(80,673)	(80,010)
Translation adjustments	(2,220)	-	-
Acquisition of a subsidiary	-	62,316	-
At the end of the year	(3,778,536)	(3,217,644)	(2,309,853)
	67,689,529	49,050,780	32,794,936
Finished goods:			
At the beginning of the year	4,251,709	3,027,029	3,180,732
Purchase of tin metals	-	810,418	-
Addition of provision for inventories, net	240,090	78,569	12,215
Reclassification from product inventories into raw materials	(170,868)	-	-
Translation adjustments	(3,385)	183	28
Acquisition of a subsidiary	-	91,849	-
At the end of the year	(5,876,211)	(4,251,709)	(3,027,029)
Total cost of revenue	**66,130,864**	**48,807,119**	**32,960,882**

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

33. GENERAL AND ADMINISTRATIVE EXPENSES

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Salaries, wages, bonuses and employee benefits	2,493,183	2,367,421	1,708,328
Third-party services	663,512	377,182	306,834
Business travel and education	614,580	426,815	247,785
Corporate social responsibility programme	532,002	549,856	224,424
Rent	217,409	125,885	129,716
Depreciation and amortisation	189,151	152,796	123,177
Office expenses	174,090	87,061	65,759
Maintenances and repairs	158,772	141,697	135,753
Others (each below Rp100 billion)	1,145,026	914,146	643,461
Total general and administrative expenses	**6,187,725**	**5,142,859**	**3,585,237**

34. SELLING AND MARKETING EXPENSES

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Freight and insurance	967,074	893,770	249,811
Export expenses	344,807	273,979	155,485
Ore export duty	317,781	219,230	188,274
Salaries, wages, bonuses and employee benefits	295,066	343,704	306,103
Depreciation and amortisation	143,585	152,484	171,719
Third-party services	116,321	59,728	116,043
Others (each below Rp100 billion)	353,689	427,258	309,754
Total selling and marketing expenses	**2,538,323**	**2,370,153**	**1,497,189**

35. FINANCE INCOME

	31 December 2019	31 December 2018 *)	31 December 2017
Interest income from cash in banks and time deposits	831,508	902,911	567,175
Unwinding of discounting impact on trade and other receivables	24,288	76,527	-
Interest income from available-for-sale financial assets	14,367	31,088	62,685
Total finance income	**870,163**	**1,010,526**	**629,860**

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

36. FINANCE COSTS

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Interest expenses from bonds payable	4,404,065	911,503	298,806
Interest expenses from bank borrowings and finance lease	1,049,346	560,990	511,868
Amortisation of bank borrowings and bonds payable transaction costs	142,449	-	-
Interest expenses on receivables - discounting impact	53,148	38,370	121,726
Accretion for provision for environmental reclamation and mine closure	46,137	25,866	24,764
Bank charges	7,879	5,504	2,782
(Gain)/loss on foreign exchange from bank borrowings in foreign currency	(373,489)	586,777	62,661
Less:			
Finance costs capitalised on qualifying assets	(29,195)	(8,359)	(23,495)
Total finance costs	**5,300,340**	**2,120,651**	**999,112**

37. OTHER INCOME, NET

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Regional tax disputes	1,073,747	(777,292)	(135,140)
Gain from revaluation of investment properties (Note 15)	226,266	208,588	105,081
Gain from sales of fixed assets	89,723	-	-
(Loss)/gain on foreign exchange, net	(275,231)	218,202	(24,272)
Provision for impairment of investment (Note 13a)	(104,152)	-	(75,118)
Dividend from PTFI (Note 10)	-	2,569,263	427,587
Adjustment in fair value of investment (Note 12)	-	2,404,970	-
Gain on bargain purchase (Note 5)	-	2,226,369	-
Others (each below Rp100 billion)	400,403	(95,787)	299,005
Total other income, net	**1,410,756**	**6,754,313**	**597,143**

38. DIVIDENDS AND APPROPRIATED RETAINED EARNINGS

Based on Annual General Meeting of Shareholders ("AGMS") decision dated 29 May 2019, the shareholder approved a cash dividend distribution amounting to Rp1,087,496 million or equivalent to US$75,625,591 or US$0.58/share and to increase the appropriated retained earnings from 2018 net income after deducting by dividend payment or amounting to Rp7,196,219 million. The dividend was fully paid on 28 June 2019.

Based on the AGMS decision dated 7 June 2018, the shareholder approved a cash dividend distribution amounting to Rp1,919,750 million or equivalent to US$133,278,950 or US$1.02/share. The dividend was fully paid on 6 July 2018.

Based on the AGMS decision dated 5 May 2017, the shareholder approved a cash dividend distribution amounting to Rp267,811 million or equivalent to US$19,932,278 or US$22/share. The dividend was paid on 23 May 2017. In addition, the Company's shareholders appropriated retained earnings in accordance with Article 70 Law No. 40 Year 2007 regarding Limited Company Law amounting to US$10,000,000 or equivalent to Rp133,835 million.

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

39. RELATED PARTIES INFORMATION

a. Transactions and balances with related parties

The Company is controlled by the GoI. The transactions and balances with related parties are as follows:

	31 December 2019	31 December 2018	31 December 2017
Revenue			
PLN	7,207,589	6,126,040	6,331,402
PT Indonesia Power ("PTIP")	3,706,345	2,828,620	3,374,167
PT Pegadaian (Persero)	522,112	888,808	671,474
PT Pupuk Sriwidjaja Palembang	383,052	322,567	97,130
BPI	298,918	212,102	84,359
BSM	290,944	16,485	125,169
Others (each below Rp100 billion)	155,440	322,979	378,617
Total revenue	12,564,400	10,717,601	11,062,318

Other transactions mainly represent revenue transactions with PT Semen Baturaja (Persero), BRI and PT Jasa Marga (Persero) Tbk.

	31 December 2019	31 December 2018	31 December 2017
Purchases of goods and services			
PT Kereta Api Indonesia (Persero) ("KAI")	4,848,453	4,453,907	4,043,470
PT Pertamina (Persero) ("Pertamina")	1,772,975	1,659,564	1,071,168
WIKA	485,634	1,764,896	1,029,095
PT PP (Persero) Tbk ("PT PP")	293,075	73,269	-
Others (each below Rp100 billion)	389,032	209,391	250,115
Total purchases of goods and services	7,789,169	8,161,027	6,393,848

Other transactions mainly represent purchases of goods and services transactions with PT Pupuk Indonesia (Persero), PT Danareksa (Persero) ("Danareksa") and PT Asuransi Jasa Indonesia ("Jasindo").

	31 December 2019	31 December 2018	31 December 2017
Finance income			
Mandiri, PT Bank Tabungan Negara (Persero) Tbk ("BTN"), BRI, BNI, PT Bank Pembangunan Daerah Sumatera Selatan & Bangka Belitung ("BPD Sumsel Babel"), PT Bank Pembangunan Daerah Sumatera Utara ("BPD Sumut"), PT Bank Pembangunan Daerah Jawa Barat dan Banten Tbk ("BPD Jabar Banten"), PT BRI Agroniaga Tbk ("BRI Agro"), PT Bank Jateng Syariah, PT Bank Pembangunan Daerah Kalimantan Barat ("BPD Kalbar") and PT Bank Pembangunan Daerah Sulawesi Tenggara ("BPD Sultra") and others	658,281	959,769	364,629

Other transactions mainly represent transactions with Pertamina and Danareksa.

(Expressed in millions of Rupiah, unless otherwise stated)

39. RELATED PARTIES INFORMATION (continued)

a. Transactions and balances with related parties (continued)

	31 December 2019	31 December 2018	31 December 2017
Finance costs			
Mandiri, BRI, BNI, BNI Syariah and BSM	279,718	123,638	108,439
Pension fund contribution payment			
PT Asuransi Jiwa Tugu Mandiri	140,026	54,827	-
PT Asuransi Jiwasraya	121,261	123,604	10,721
DPBA	21,309	37,967	20,952
PT BNI Life Insurance ("BNI Life")	6,532	-	-
DP Antam	5,648	5,740	5,795
Yakespen Antam	2,295	2,163	2,315
Total pension fund contribution payment	297,071	224,301	39,783
Cash in banks			
Mandiri	2,687,982	2,490,723	1,817,288
BRI	799,341	718,265	713,242
BNI	389,186	802,992	242,093
BTN	157,486	90,468	3,949
Others (each below Rp100 billion)	181,833	74,259	34,912
Total cash in banks	4,215,828	4,176,707	2,811,484
Short-term time deposits			
BRI	2,551,125	4,747,504	7,211,254
BNI	2,522,913	3,618,729	1,991,636
BTN	2,470,392	3,506,000	514,641
Mandiri	930,238	2,500,656	1,720,798
BTN Syariah	642,500	520,000	160,000
BPD Sumsel Babel	350,000	200,000	530,000
BPD Jabar Banten	205,000	-	120,000
BPD Sumut	140,000	160,000	20,000
Others (each below Rp100 billion)	40,000	140,000	98,240
Total short-term time deposits	9,852,168	15,392,889	12,366,569
Time deposits			
BRI	3,289,064	415,468	882,880
Mandiri	1,343,554	1,883,220	20,000
BNI	1,001,962	654,638	1,104,162
Mandiri Taspen	400,000	-	-
BTN	274,010	200,000	400,000
Others	70,000	-	-
Total time deposits	6,378,590	3,153,326	2,407,042

(Expressed in millions of Rupiah, unless otherwise stated)

39. RELATED PARTIES INFORMATION (continued)

a. Transactions and balances with related parties (continued)

	31 December 2019	31 December 2018	31 December 2017
Trade receivables			
PLN	1,016,272	482,465	1,345,714
PTIP	534,603	1,066,807	1,972,627
BPI	460,160	357,259	339,276
Others (each below Rp100 billion)	39,419	171,292	95,583
Total trade receivables	**2,050,454**	**2,077,823**	**3,753,200**

Other balances mainly represent transactions with PT Pupuk Sriwidjaja Palembang and PT Semen Baturaja (Persero) Tbk.

	31 December 2019	31 December 2018	31 December 2017
Other receivables			
PT Meratus Jaya Iron & Steel (“MJIS”)	54,793	54,793	54,793
PT PAL Indonesia (Persero) (“PT PAL”)	52,640	67,949	82,531
BPI	51,883	-	-
ICA	-	-	1,366,688
Others (each below Rp50 billion)	73,469	66,990	111,277
Provision for impairment	(118,457)	(96,051)	(41,704)
Total other receivables	**114,328**	**93,681**	**1,573,585**
Less:			
Current portion	**(23,953)**	**(18,381)**	**(15,674)**
Non-current portion	**90,375**	**75,300**	**1,557,911**

Other balances mainly represent transactions with PT Sarana Karya (Persero) (“SK”), PT Industri Nuklir Indonesia (“INUKI”) and PT Bhanda Ghara Reksa (Persero).

	31 December 2019	31 December 2018	31 December 2017
Available-for-sale financial assets			
Obligasi Pertamina	179,556	164,901	163,166
Danareksa	-	158,669	245,499
Total available-for-sale financial assets	**179,556**	**323,570**	**408,665**
Restricted cash			
BRI, Mandiri, BNI and BPD Sultra	**166,705**	**148,677**	**29,696**
Trade payables			
KAI	186,004	139,277	147,290
Pertamina	140,029	628,097	89,601
WIKA	107,442	273,778	398,818
Others (each below Rp50 billion)	79,667	86,268	80,256
Total trade payables	**513,142**	**1,127,420**	**715,965**

Other balances mainly represent transactions with PT Adhi Karya (Persero) Tbk (“Adhi Karya”), PT Dahana (Persero) and BUMD Perdana Cipta Mandiri.

(Expressed in millions of Rupiah, unless otherwise stated)

39. RELATED PARTIES INFORMATION (continued)

a. Transactions and balances with related parties (continued)

	31 December 2019	31 December 2018	31 December 2017
Accruals			
KAI	225,918	217,032	188,992
Others (each below R50,000)	47,831	83,946	96,339
Total accruals	**273,749**	**300,978**	**285,331**

Other balances mainly represent transactions with Pertamina, WIKA and Jasindo.

	31 December 2019	31 December 2018	31 December 2017
Bank borrowings			
Mandiri	7,366,732	2,890,069	2,328,302
BNI	1,081,695	1,219,614	4,038
BRI	264,008	518,800	1,377,884
SMI	65,680	-	-
BNI Syariah	8,118	-	-
BSM	2,877	48,540	68,232
Total bank borrowings	**8,789,110**	**4,677,023**	**3,778,456**

b. Key management compensation

For the years ended 31 December 2019, 2018 and 2017, salaries and other short-term benefits and post-employment benefits provided to the Group's Boards of Commissioners, Directors and other key management personnel were totalling to Rp338,296 million (2018: Rp253,325 million and 2017: Rp124,292 million).

c. The nature of the relationships

Related parties	Relationships	Nature of transactions
Boards of Commissioners and Directors and other key management personnels	Key management personnel	Salaries and employee benefits
BNI Syariah, BRI Syariah, BTN, BTN Syariah, BPD Sumsel Babel, BPD Sumut, PT Bank Jateng Syariah, BPD Jabar Banten, BRI Agro, BPD Kaltim, PT Bank Riau Kepri, BPD Sultra, and BPD Kalbar	Entity related with the GoI	Cash in banks, time deposits, guarantee, customer of precious metal and bank borrowings
BNI, BRI and BSM	Entity related with the GoI	Cash in banks, time deposits, customer of precious metal and bank borrowings
Mandiri	Entity related with the GoI	Cash in banks, time deposits, guarantee for fuel purchases from Pertamina and bank borrowings
SMI	Entity related with the GoI	Bank borrowings
Jasindo	Entity related with the GoI	Insurance services

39. RELATED PARTIES INFORMATION (continued)

c. The nature of the relationships (continued)

Related parties	Relationships	Nature of transactions
PT Asuransi Jiwa Tugu Mandiri	Entity related with the GoI	Investment in associates and other assets
Pertamina	Entity related with the GoI	Purchases of goods and services for production activities, customer of precious metal and bonds placement
PT Perusahaan Perdagangan Indonesia (Persero) and PT Barata Indonesia (Persero)	Entity related with the GoI	Purchases of goods and services for production activities
PT Petrokimia Gresik	Entity related with the GoI	Raw material purchases
PT Nindya Karya (Persero) and WIKA	Entity related with the GoI	Purchases of goods for production activities and construction services
PT Dahana (Persero)	Entity related with the GoI	Purchases of explosive material and goods for production activities
PT PP, Adhi Karya and PT Krakatau Engineering	Entity related with the GoI	Construction services
PT Yodya Karya (Persero)	Entity related with the GoI	Building construction consultation services
Perum Jasa Tirta	Entity related with the GoI	Water management services
PT Sucofindo (Persero)	Entity related with the GoI	Coal survey and environment management services
BUMD Perdana Cipta Mandiri, PT Pelindo I (Persero), PT Pelindo II (Persero) and PT Djakarta Lloyd (Persero)	Entity related with the GoI	Transportation services
KAI	Entity related with the GoI	Coal transportation
PT Pegadaian (Persero), PT Garuda Indonesia (Persero) Tbk, PT Semen Indonesia (Persero) Tbk, PT Pos Indonesia (Persero), PT Biro Klasifikasi Indonesia (Persero), PT Krakatau Steel (Persero) Tbk, PT Perusahaan Gas Negara Tbk and PT Jasa Marga (Persero) Tbk	Entity related with the GoI	Customer of precious metal
PT Pupuk Sriwidjaja Palembang	Entity related with the GoI	Customer of precious metal and coal sales

39. RELATED PARTIES INFORMATION (continued)

c. The nature of the relationships (continued)

Related parties	Relationships	Nature of transactions
DP Antam and DPBA	Provider of pension benefit plan	Pension fund management
Yakespen Antam	Provider of post-employment medical benefits	Post-employment medical benefit plan services
PT Asuransi Jiwasraya and BNI Life	Entity related with the GoI	Provider of defined contribution pension plans
PT Wijaya Karya Industri & Konstruksi	Entity related with the GoI	Aluminium sales
PTIP and PT Semen Baturaja (Persero) Tbk	Entity related with the GoI	Coal sales
PLN	Entity related with the GoI	Coal sales and electricity usage
INUKI, PT PAL, SK and PT Bhanda Ghara Reksa (Persero)	Entity related with the GoI	Other receivables
Danareksa	Entity related with the GoI	Mutual fund investments
NHM	An associate of the Group	Customer of precious metal
MJIS	An associate of the Group	Interest bearing loan to related party
BPI	A joint venture of the Group	Coal sales
HBAP and PT Bukit Asam Transpacific Railway	A joint venture of the Group	Other receivables
PT Reksa Griya Antam	Subsidiary of Dana Pensiun Antam	Rental of office space, maintenance and cleaning services

40. SIGNIFICANT AGREEMENTS, COMMITMENTS AND CONTINGENCIES

a. Heads of Agreement between the GoI, the Papua Government and the Mimika Regency

On 12 January 2018, the Company, the GoI, the Papua Government and the Mimika Regency entered into a heads of agreement relating to the planned PTFI Share Acquisition and the equity interests in PTFI that each entity is intended to hold following the completion of the PTFI Acquisition (the “GoI, Papua Government, Mimika Regency and the Company Heads of Agreement”). The GoI, the Papua Government and the Mimika Regency are stakeholders in the Grasberg Mine, with the GoI being the holder of the mining concession for the Grasberg Mine, and the Grasberg Mine being situated in the province of Papua and in the province’s Mimika Regency.

40. SIGNIFICANT AGREEMENTS, COMMITMENTS AND CONTINGENCIES (continued)

a. Heads of Agreement between the GoI, the Papua Government and the Mimika Regency (continued)

Pursuant to the GoI, Papua Government, Mimika Regency and the Company Heads of Agreement, the GoI has agreed to procure, and the Papua Government and the Mimika Regency have agreed to subscribe for shares in an entity nominated by the GoI that would result in the Papua Government and the Mimika Regency together indirectly holding 10% of the shares of PTFI, following the completion of the PTFI Share Acquisition. Under the GoI, Papua Government, Mimika Regency and the Company Heads of Agreement, the Papua Government and the Mimika Regency will indirectly hold their shares in PTFI by subscribing for shares in the entity nominated by the GoI through a BUMD to be jointly owned by the Papua Government and the Mimika Regency. The subscription price for the aforementioned shares to be paid by the Papua Government and the Mimika Regency, respectively, will be equivalent to the value of the stakes in PTFI, calculated on the same basis as the purchase price made by the Company, in the PTFI Share Acquisition.

Under the GoI, Papua Government, Mimika Regency and the Company Heads of Agreement, the Company would lend to the BUMD the funds required to subscribe for the shares in such nominated entity (IPMM) owned by the BUMD, and such loan will be secured by the same shares. The Papua Government and the Mimika Regency have also agreed (i) not to transfer or sell these shares to any party, other than to the Company, (ii) to transfer an agreed portion of the dividends paid on such shares to the Company, until the loan that is contemplated to be provided by the Company to the BUMD has been fully repaid.

b. Heads of Agreement

On 12 July 2018, the Company signed Heads of Agreement ("HoA") with FCX, PTFI, Rio Tinto Indonesian Holdings Limited ("Rio Tinto Indonesian Holding") and Rio Tinto Nominees Limited ("Rio Tinto Nominees"), before the PTFI Divestment Agreement is signed. Refer to the PTFI Divestment Agreement in Note 40c.

c. PTFI Divestment Agreement ("PDA")

On 27 September 2018, the Company entered into an agreement relating to the Company's acquisition of an increased equity stake in PTFI with PTFI, FCX, International Support, PTII (IPMM), pursuant to which as follows:

(i) the Company will purchase, and FCX and International Support will sell to the Company, all of their shares in PTII (IPMM) for a consideration of US$350 million, which is required to be paid in cash at the completion of the PTFI Share Acquisition (the "PTII (IPMM) Share Acquisition").

(ii) the Company, PTFI and PTII (IPMM) will enter into an agreement (the "PTFI Share Subscription Agreement"), through which the Company and PTII (IPMM) will subscribe for, and PTFI will issue to the Company and PTII (IPMM), shares in PTFI, representing 20.60% and 19.40%, respectively, of the outstanding ordinary shares of PTFI immediately following the completion of the PTII (IPMM) Share Acquisition;

(iii) the Company, Rio Tinto Nominees and Rio Tinto Indonesian Holding (the "PTRTI sellers") will enter into an agreement (the "PTRTI Buyout Agreement"), relating to the Company (whereby the Company later nominated PTFI for acquiring all of the outstanding shares of PTRTI); and

(iv) PTFI and PTRTI will enter into a merger deed, which will effect the merger of PTRTI into PTFI (the "PTFI and PTRTI Merger").

40. SIGNIFICANT AGREEMENTS, COMMITMENTS AND CONTINGENCIES (continued)

c. PTFI Divestment Agreement ("PDA") (continued)

The PDA contains representations, warranties, covenants and indemnifications of the parties to the agreement that are customary for transactions of this nature. The conditions precedent contained in the PDA include, among others, the following: (i) the extension and stability of PTFI's long-term mining rights (in the form of a new Izin Usaha Pertambangan Khusus ("IUPK") or otherwise) through 2041 in a form acceptable to the Company and FCX; (ii) the resolution of environmental regulatory matters satisfactory to the GoI, including the Ministry of Environment and Forestry issuing a decree approving the environmental compliance road map proposed by PTFI in relation to prospective mining operations at the Grasberg Mine; (iii) the completion of various other Indonesian regulatory actions and receipt of various other Indonesian regulatory approvals, including the Indonesian Tax Office approving the merger of PTFI and PTRTI, and determining the transfer of relevant assets relating to the same to be, on a tax-neutral basis, and the Agency for Financial and Development Supervision and the Indonesian Attorney General, respectively, issuing its review report and legal opinion, in respect of the transactions contemplated under the PDA; (iv) receipt of customary approvals from international competition authorities; and (v) the Inalum Group and FCX having agreed on the six members of the Board of Commissioners and Directors of PTFI, each of which will take office from the closing of the transactions under the PDA.

The above conditions precedent have been completed at the completion of PTFI shares acquisition dated 21 December 2018.

d. PTFI Share Subscription Agreement

On 27 September 2018, the Company entered into the PTFI Share Subscription Agreement with PTFI and PTII (IPMM), pursuant to which, the Company and PTII (IPMM) will subscribe for, and PTFI will issue to the Company and PTII (IPMM), shares in PTFI, representing 20.60% and 19.40% of the outstanding ordinary shares of PTFI immediately following the completion of the PTFI Share Acquisition. Under the agreement, the Company and PTII (IPMM) are each required to pay US$1,802.5 million or equivalent to Rp26,102,002 million and US$1,697.5 million or equivalent to Rp24,581,498 million, respectively, for such shares in PTFI.

On 21 December 2018, the Company and PTII (IPMM) have paid US$1,802.5 million or equivalent to Rp26,102,002 million and US$1,697.5 million or equivalent to Rp24,581,498 million to PTFI for 40% of subscribed PTFI shares after all conditions precedent were completed.

e. PTRTI Buyout Agreement

On 28 September 2018, the Company entered into the PTRTI Buyout Agreement with PTRTI sellers, pursuant to which the Company has agreed to purchase and the PTRTI sellers have agreed to sell to the Company all the outstanding shares of PTRTI (the "PTRTI Shares") for a consideration of US$3.5 billion, required to be paid at the completion of such sale and purchase of shares. Under this agreement, the Company is permitted to, and the Company has nominated PTFI as the purchaser of the PTRTI Shares.

The obligations of the parties with respect to closing under the PTRTI Buyout Agreement are subject to the satisfaction or waiver of the following conditions precedent: (i) receipt by PTRTI of written approval from the MEMR for the transfer of the PTRTI Shares; (ii) receipt by the PTRTI sellers of a valid tax ruling or clearance issued by the Indonesian Tax Authority in a form and substance satisfactory to the PTRTI sellers; (iii) termination of intercompany agreements between PTRTI and other members of the Rio Tinto Group; (iv) satisfaction or waiver of the conditions precedent under the PDA and PTFI Share Subscription Agreement; and (v) issuance of a document which sets out the environmental management and monitoring procedure as part of the environmental audit process imposed on licensed businesses and/or activities and resolution of environmental matters which could result in environmental liabilities to the Company.

(Expressed in millions of Rupiah, unless otherwise stated)

40. SIGNIFICANT AGREEMENTS, COMMITMENTS AND CONTINGENCIES (continued)

e. PTRTI Buyout Agreement (continued)

Following the closing of the transactions under the PTRTI Buyout Agreement, the PTRTI sellers have agreed to indemnify the Company with respect to any amount of tax payable by PTRTI, to the extent that such tax arises from or relates to an event or omission at or before completion of the PTRTI buyout, or any income, profit or gain earned before the closing of the transactions contemplated under the PTRTI Buyout Agreement.

All conditions precedent in the PTRTI Buyout Agreement has been fulfilled.

f. Shareholders Agreement among PT Freeport Indonesia, PT Indonesia Papua Metal dan Mineral, FCX, and the Company

Pursuant to a shareholders agreement which have been entered into between the Company, PTII (IPMM), PTFI and FCX after the completion of PTFI Share Acquisition on 21 December 2018, it is contemplated that, between the completion of the PTFI Share Acquisition and the earlier of (i) 31 December 2022 or (ii) PTFI's cumulative production and sales of gold and copper exceeding predetermined amounts (the "Initial Period"), the Company and FCX will retain the economics right of revenue and cost sharing arrangements in relation to PTFI in the same manner as though PTFI's joint venture with PTRTI was still in place. Following the Initial Period, it is intended that the economics of revenue and cost sharing arrangements in relation to PTFI will reflect the Company and FCX's respective equity interest in PTFI.

g. Sales agreements

The Group has various commitments to sell its products to various customers at specified agreed quantities based on the agreements signed by the Group with those customers. Generally, selling price agreed with customers is based on several indices as adjusted with certain factors. The selling price adjustments vary between customers, which depend on factors such as the specification of the requested products, handling costs, freight differential, terms of payment, etc. The products will be periodically delivered for the periods as agreed between both parties.

h. Coal sales agreements

As at 31 December 2019, 2018 and 2017, the Group has sales commitments to several customers through Bukit Asam, a subsidiary. Below are the customers and total sales made by Bukit Asam:

Customer name	Contract date	Expiry date	Total sales 2019	Total sales 2018	Total sales 2017
BPI	7 December 2011	14 June 2044	Rp299 billion	Rp212 billion	Rp84 billion
PTIP - PLTU Suralaya	28 January 2013	31 December 2022	Rp3.7 trillion	Rp2.8 trillion	Rp3.4 trillion
PLN - PLTU Bukit Asam	14 October 2004	31 December 2023	Rp379 billion	Rp251 billion	Rp184 billion
PLN - PLTU Tarahan	9 October 2007	31 December 2031	Rp416 billion	Rp406 billion	Rp348 billion
PLN - 13 PLTU in Indonesia (2018 and 2017: 15 PLTU)	28 December 2012	28 December 2032	Rp6.1 trillion	Rp5.4 trillion	Rp3.2 trillion

(Expressed in millions of Rupiah, unless otherwise stated)

40. SIGNIFICANT AGREEMENTS, COMMITMENTS AND CONTINGENCIES (continued)

i. Ownership interests in joint mining entities

Antam has ownership interests in joint mining entities that hold CoWs with the GoI without any cash contributions ("free carried") as follows:

	Percentage of ownership (%)	Status as at 31 December 2019
PT Antam Niterra Haltim	30	Construction
PT Sorikmas Mining	25	Construction
PT Galuh Cempaka	20	Production*
PT Gorontalo Minerals	20	Feasibility Study
PT Sumbawa Timur Mining	20	Exploration
PT Weda Bay Nickel	10	Construction

* The production phase is suspended due to the reassessment of the value of reserves.

Antam will only contribute funds to the operations of the above companies in accordance with Antam's ownership interest if they have entered the production stage.

On 29 December 2017, Antam divested 20% of its free carried shares ownership in PT Dairi Prima Minerals ("DPM") to PT Bumi Resources Minerals Tbk ("BRM"). The divestment of the share ownership was related to the plan of China Nonferrous Metal Industry's Foreign Engineering and Construction Co., Ltd ("NFC") to acquire the majority of the shares of DPM. The Group recognised a gain of Rp776,430 million from this divestment. The Group receives proceeds from this divestment of shares of DPM upon payment from NFC to BRM.

j. Acquiring interest in NHM

On 20 December 2012, Antam acquired an additional 7.5% interest in NHM, increasing its total interest to 25%. Based on the Conditional Sale and Purchase Agreement, the consideration for the additional interest acquired was US$130,000,000 with an additional US$30,000,000 (contingent purchase price), which was payable subject to a further 1 million ounces (unaudited) of additional gold resources (indicated and/or measured) up to 31 December 2017, based on the JORC report issued by an independent consultant.

Up to 2015, the additional gold resources (estimated and/or measured) based on a competent assessor were 480,000 ounces (unaudited). As such, Antam recognised a contingent purchase price amounting to US$14,400,000.

On 30 March 2016, Antam entered into an amendment of the Conditional Sale and Purchase Agreement. Based on the amendment of the agreement, the contingent purchase price was amended to US$20,000,000, which was payable subject to a further 2.445 million ounces of additional gold resources (indicated and/or measured), based on the JORC report issued by an independent consultant. The contingent purchase price for 2017 was US$5/ounces.

k. Alumina project and joint venture agreement

Common Terms Agreement ("CTA")

On 13 June 2011, ICA entered into a CTA with JBIC for a JBIC Loan Facility and Mizuho and Sumitomo Ltd. for a Commercial Loan Facility. The total amounts of the JBIC Loan Facility and Commercial Loan Facility were JPY15,795,000,000 and JPY10,530,000,000, respectively. ICA is required to repay all of the loan facilities from 15 December 2014 until 15 December 2020. Antam provided a guarantee for the repayment of ICA's loan.

(Expressed in millions of Rupiah, unless otherwise stated)

40. SIGNIFICANT AGREEMENTS, COMMITMENTS AND CONTINGENCIES (continued)

k. Alumina project and joint venture agreement (continued)

Common Terms Agreement ("CTA") (continued)

On 28 September 2011, ICA entered into a Pledge of Shares Agreement with Antam and BMI, whereby Antam agreed to, among other things, pledge all of its shares in ICA for the interest of BMI, for and on behalf of the Finance Parties, as security for the full payment of the Secured Obligations.

Agreement regarding the entrustment of guarantee commitment

On 13 June 2011, Antam, SDK and Japan Oil, Gas and Metal National Corporation ("JOGMEC") entered into a Guarantee Agreement, whereby JOGMEC agreed to guarantee the payment of 80% of the loans from the Commercial Loan Facility. As a result of the JOGMEC guarantee, Antam and SDK as guarantors have to, among other things:

(i) Make sure that the Guarantee Agreement does not breach any applicable laws and regulations including environmental regulations;
(ii) Guarantee not to amend, terminate, cancel and suspend the Offtake Agreement, the Sale and Purchase Agreement for Washed Bauxite ("WBX") and the Manufacturing, Technology and Technical and Operational Agreement;
(iii) Maintain the required credit rating and financial ratios.

Priority agreement

On 28 September 2011, ICA entered into a Priority Agreement with JOGMEC, Mizuho, Antam, and SDK which contained the following significant provisions:

- Until the date on which the payment obligations for all sums of principal, interest and any other amounts that are payable by ICA to the Finance Parties pursuant to the Finance Documents have been fully paid, JOGMEC may not demand or receive payment from ICA or its shareholders relating to any claims, and any default interest due and owing to JOGMEC under the JOGMEC Guarantee Entrustment Agreement ("JOGMEC Subordinated Guarantee Default Interest"), that is of a higher rate than the highest default interest rate charged to ICA under the CTA.

- JOGMEC acknowledges that the JOGMEC Subordinated Guarantee Default Interest shall be subordinated to all of the other rights of the Finance Parties under the Finance Documents.

- The discharge of SDK as one of the parties on previous Priority Agreement (before amendment).

l. Coal delivery agreements with KAI

The Group through Bukit Asam, a subsidiary, entered into a coal delivery agreement with KAI whereby KAI agreed to deliver Bukit Asam's coal from Bukit Asam's train loading station in Tanjung Enim to the following ports:

			Total coal delivery expenses		
Port names	**Contract date**	**Expiry date**	**31 December 2019**	**31 December 2018**	**31 December 2017**
Tarahan, Lampung	9 June 2017	31 December 2021	Rp4.5 trillion	Rp4.1 trillion	Rp3.7 trillion
Kertapati, Palembang	9 June 2017	31 December 2021	Rp387 billion	Rp331 billion	Rp330 billion

40. SIGNIFICANT AGREEMENTS, COMMITMENTS AND CONTINGENCIES (continued)

m. Mining Service Agreements with PT Pama Persada Nusantara ("Pama")

The Group has contracted with Pama since 2011 for the provision of mining-related services relating to overburden removal and coal hauling services for the stockpile and train loading stations, including the supply of heavy equipment and dump trucks, at the Group's Tambang Air Laya and Muara Tiga Besar coal mining concession areas.

On 11 April 2014, the Group entered into a five-year service agreement with Pama. The agreement has been amended on 27 December 2018, that for the period of 1 January 2019 to 31 December 2023, target production is set to be 80,000,000 BCM for soil with average distance of 3 km and 20,000,000 tons for coal with an average distance of 4 km.

For the years ended 31 December 2019, 2018 and 2017, the total expenses for Pama's mining services amounting to Rp3.5 trillion, Rp2.6 trillion and Rp2.1 trillion, respectively.

n. East Halmahera Ferronickel Plant Construction Project

On 21 December 2016, Antam entered into an agreement with the Unincorporated Consortium of Wika and Kawasaki Heavy Industries, Ltd. Whereby effective from 31 January 2017, the consortium shall provide services related to the engineering, procurement and construction of the East Halmahera Ferronickel Plant phase I with production capacity 13,500 tons/year. The contract was amounting to Rp3,421,425 million.

As at 31 December 2019, the amount of capital expenditure commitment based on this agreement was Rp73,505 million.

o. Mining Law No. 4/2009

On 12 January 2009, the GoI issued a Mining Law regarding Mineral and Coal Mining. The Law notes that existing CoWs and CCoWs will be honoured until their expiration with the provision that the CCoWs must be adjusted in line with Law No. 4/2009 within a period of 1 (one) year.

On 1 February 2010, the GoI issued GR No. 23 Year 2010 regarding Implementation of Mineral and Coal Mining Business Activities, as latest amended by GR No. 8 Year 2018 dated 7 March 2018, which regulates domestic coal price setting for domestic interest. Overall, this GR also regulates the mechanism for conversion from KK or CCoW to IUPK, the requirement of IUPs extention, the requirement for domestic processing and refinery, coal sales (export and local) to refer to the coal benchmark price, procedures to obtain WIUP or WIUPK, divestments and mining areas.

In the preparation process of the consolidated financial statements, Mining Law is included in the 2020 national legislation program to be amended. The Group is closely monitoring the progress of the amendment for Mining Law and the implementing regulations and will consider the impact on its operations, if any, as these regulations are issued.

p. Ministerial Regulation No. 11/2018 as amended by Ministerial Regulation No. 7/2020

On 19 February 2018, the MEMR issued Ministerial Regulation No. 11/2018 concerning Procedures for the Granting of Areas, Licensing and Reporting on Mineral and Coal Mining Activities ("Ministerial Regulation No. 11/2018") revoking Ministerial Regulation No. 15/2017. This regulation stipulates procedures for setting the Wilayah Usaha Pertambangan ("WUP") and Wilayah Usaha Pertambangan Khusus ("WUPK"), WIUP and WIUPK auction for metal mineral and coal, grant of license, grant of IUPK in the form of priority (state-owned entity and/or BUMD) or auction, obligation for mining license holder, work plan and budget preparation and reporting on mineral and coal mining activities.

40. SIGNIFICANT AGREEMENTS, COMMITMENTS AND CONTINGENCIES (continued)

p. Ministerial Regulation No. 11/2018 as amended by Ministerial Regulation No. 7/2020 (continued)

Ministerial Regulation No. 11/2018 as amended first by Ministerial Regulation No. 22/2018 dated 16 April 2018 and latest amended by Ministerial Regulation No. 51/2018 dated 5 December 2018 which regulates the same matter, amends and adds some provisions regarding the preparation and determination of WIUP or WIUPK, the procedures for granting of WIUP and WIUPK, and the rights, obligations and prohibitions for IUP and IUPK holders, and the continuation of CCoW operations.

Ministerial Regulation No. 11/2018 has been amended by Ministerial Regulation No. 7/2020 which is effective since 6 March 2020. This regulation stipulates procedures for setting the WUP and WUPK, WIUP and WIUPK auction for metal mineral and coal, grant of license, grant of IUPK in the form of priority (state-owned entity and/or BUMD) or auction, obligation for mining license holder, work plan and budget preparation and reporting on mineral and coal mining activities. In addition, this regulation also cancels the regulation regarding mining license, KK and CCoW holder's obligation to obtain approval from MEMR in the cases of changes in Directors and Commissioners. For SoE, the regulation regarding changes in Directors and Commissioners should refer to the SoE regulation.

q. MEMR Decree No. 1796.K/30/MEM/2018

On 19 April 2018, the MEMR issued MEMR Decree No. 1796.K/30/MEM/2018 regarding the Application, Evaluation, and Issuance of Licences in the Mineral and Coal Mining Sector, which among other things, regulates the guidelines for the implementation of application, evaluation and the issuance of IUP and IUPK, IUP Operation Production ("IUP OP") for processing and/or refinery, IUP OP for transportation and selling, withdrawal of exploration performance bonds, approval from program kemitraan, IUPK OP as an extension of CoW or CCoW.

r. Ministerial Regulation No. 25/2018

Ministerial Regulation No. 25/2018 which was issued on 30 April 2018, regarding Mineral and Coal Business, which was recently amended through Ministerial Regulation No. 19/2019, regulates the mineral and coal mining business, activities of IUP or IUPK, financial, non-tax state revenue, mineral and coal data processing, share divestment, manpower recruitment and capital goods procurement, equipment, raw and other supporting material, control of production and sales, mineral and coal price, minimum threshold for mineral processing or refinery, community development and empowerment, and termination of mineral and coal mining business activity.

On 5 September 2018, the MEMR issued both MEMR Decree No. 1952.K/MEM/84/2018 regarding the use of domestic banking or the offshore branch of Indonesian banks for mineral and coal export proceeds. This regulation stipulates the obligation for mining, KK and CCoW holder to use letter of credit payment method and returning all sales to domestic by using domestic bank accounts.

Management believes that the Group has complied with the requirements of the regulations mentioned above.

s. MEMR Decree No. 261 K/30/MEM/2019

On 26 December 2019, the MEMR issued Ministerial Decree No. 261 K/30/MEM/2019 regarding the Setting of the Minimum Percentage of Coal Sales for Domestic Consumption for the Year 2020 which stipulates the minimum Domestic Market Obligation ("DMO") for the year 2020, which is 25% from the production plan. The Group is closely monitoring the fulfilment of the DMO requirement.

40. SIGNIFICANT AGREEMENTS, COMMITMENTS AND CONTINGENCIES (continued)

t. Ministerial Regulation No. 7/2017

On 11 January 2017, the MEMR issued Ministerial Regulation No. 7/2017, which was recently amended through Ministerial Regulation No. 19/2018, regulating the Procedures for the Setting of Benchmark Prices for Metal Minerals and Coal Sales. Some provisions in the Ministerial Regulations related to the obligation for IUP, IUPK, KK and CCoW holder to benchmark the prices for minerals and coal sales and procedures for setting the benchmark prices for mineral and coal sales.

On 9 March 2018, the MEMR issued Ministerial Decree No. 1395 K/30/MEM/2018, which regulates a coal sales price of US$70 per metric tonne FOB vessel for supplying coal for electricity provided in the public interest. On 12 March 2018, this Ministerial Decree was amended by Ministerial Decree No. 1410 K/30/MEM/2018 to amend the effective date to become the date of enactment of this Decree up to 31 December 2019 with a maximum sales volume of 100 million metric tonnes annually. The provisions of Ministerial Decree No. 0617 K/32/MEM/2011 on the Benchmark Price for PLN for the Operation of Coal Fired Power Plants are therefore revoked from that date.

On 7 August 2018, the MEMR issued Ministerial Decree No. 1925 K/30/MEM/2018, which amends the Ministerial Decree No. 1395 K/30/MEM/2018 to regulate that IUP OP holders and KK holders who have fulfilled the minimum percentage of coal sales for domestic consumption and the requirement of coal sales price will be given the increase of total national production amounted to 100 million tonnes as long as the Group can fulfil the requirements of the technical good mining practices and the environmental obligations.

u. Regulation of increase in value-added from minerals

On 30 April 2018, MEMR issued Ministerial Regulation No. 25/2018 regarding Mineral and Coal Mining Business, as recently amended by Ministerial Regulation No. 11/2019 which was issued on 28 August 2019.

Several key provisions of this regulation, among others, are as follows:

- Holders of IUP OP, IUPK OP and IUP OP particularly for processing and/or refinery are required to carry out the processing and refining of mining products within the minimum limits of processing and/or refinery.

- For nickel, since 1 January 2020, IUP OP or IUPK OP holder is not able to sell nickel ore abroad.

- The processing and refinery activities can be done independently or in cooperation with other parties.

- Holders of IUP OP or IUPK OP can sell bauxite which has been washed with a level of Al_2O_3 >42% abroad in certain amount no later than 11 January 2022, under the following condition:
  a. They have built a purification facility; and
  b. They pay the export duty based on the applicable regulation

- Holders of Mineral CoW, IUP OP, IUPK OP and IUP OP specially for processing and/or refinery can export concentrate for a period of five years from 11 January 2017 if they meet certain requirements, as follows: they are willing to change the form of their mining business from CoW into IUPK OP (specific requirement for CoW holders), provide a commitment to build a refining facility and pay export duties under the prevailing laws and regulation.

- Export can only be done after export recommendation from the MEMR is obtained.

40. SIGNIFICANT AGREEMENTS, COMMITMENTS AND CONTINGENCIES (continued)

u. Regulation of increase in value-added from minerals (continued)

Management has assessed the provisions in MEMR Regulation No. 25/2018 including the related amendments and is of the opinion that this regulation will have a positive impact on the financial performance of the Group because based on management's assessment, the Group will be able to meet the requirements stipulated in MEMR Regulation No. 25/2018 including the related amendments.

v. Mine reclamation and mine closure

On 20 December 2010, the GoI issued PP No. 78/2010 regarding reclamation and post-mining activities for IUP, IUPK, IPR, KK and CCoW holders. This regulation updates Ministerial Regulation No. 18/2008. An IUP Exploration holder must, among other requirements, include a reclamation and post-mining plan in its exploration work plan and budget and provide a reclamation guarantee in the form of a time deposit placed at a state-owned bank.

On 2 May 2018, the GoI issued Ministerial Regulation No. 26/2018 concerning the Rules for the Implementation of Good Mining and Supervision of Mineral and Coal Mining, which among others regulates reclamation and post-mining activities for coal and mineral mining companies. Subsequently, MEMR issued MEMR Decree No. 1827.K/30/MEM/2018 concerning Guidelines for the Practice of Good Mining Practices.

On 28 February 2014, MEMR issued Ministerial Regulation No. 7/2014 regarding Reclamation and Post-mining Implementation in Mineral and Coal Mining Business Activities. This regulation stipulates that, among other things, IUP OP is required to provide a reclamation and post-mining guarantee which may be in the form of a joint account or time deposit placed at a state-owned bank, a bank guarantee or an accounting reserve (if eligible). The reclamation guarantee in the form of an accounting reserve can be provided by a mining company if the following criteria are met:

- It is registered on IDX and has placed more than 40% from total owned stock; and
- It has issued share capital of not less than US$50,000,000 as stated in the notarial deed and/or authorised by the notary.

The requirement to provide reclamation and post-mine guarantees does not release the IUP holder from the requirement to perform reclamation and post-mine activities.

Based on this regulation, the Group's subsidiary is no longer eligible to provide a reclamation guarantee in the form of an accounting reserve. As at 31 December 2019, 2018 and 2017, the Group's subsidiaries have placed reclamation guarantees in the form of bank guarantees and time deposits.

w. PP No. 81/2019 regarding Non-Tax Revenue ("PNBP") Types and Tariffs

PP No. 81/2019 was issued on 25 November 2019 and effective since then. PP No. 81/2019 revokes PP No. 9/2012 which regulates the same matter. This regulation stipulates the PNBP types in MEMR. For mineral and coal mining sector, this regulation stipulates information data compensation for WIUP and WIUPK metal mineral and coal, action performance guarantee, exploration performance guarantee, dead rent, production fee (royalty) for each mineral and coal commodities.

40. SIGNIFICANT AGREEMENTS, COMMITMENTS AND CONTINGENCIES (continued)

x. Forestry Regulation

On 21 February 2019, the Ministry of Forestry issued Ministerial Regulation No. P.7/ MENLHK/SETJEN/KUM/1/2/2019 regarding Amendment of Ministry of Environmental and Forestry Regulation No. P.27/MENLHK/ SETJEN/KUM.1/7/2018 regarding Lease Guidelines of Forest Area. This regulation is effective since 26 April 2019. Pursuant to this regulation, the Group may be given a forestry permit to use a forest area for two years for exploration activities and the maximum equals to the Group's mining permits to conduct non-forestry activities subject to a number of preconditions. One of the most significant preconditions under this regulation, depending on the location and the purpose of the activities to be conducted in the forest area, is for a company to be required to provide compensation land or be obliged to pay PNBP.

As at 31 December 2019 , 2018 and 2017, the Group has implemented the requirements of this regulation and the management believes that this regulation will have no significant impact on the Group's operations.

y. Production facility under development

On 14 April 2016, as amended on 28 November 2017, the Group through BAI is in the process of constructing a production plant to process bauxite ore into smelter grade alumina (the "Mempawah Smelter Grade Alumina Refinery Plant"), in Mempawah, West Kalimantan, Indonesia.

As at the completion of these consolidated financial statements, the development of production plant is still ongoing.

z. Calcined Petroleum Coke Plant

In December 2019, the Company entered into a joint venture development agreement with Pertamina to establish a joint venture for the construction of a calcined petroleum coke plant (the "Dumai CPC Plant") in Kuala Tanjung, North Sumatra. Under the terms of the agreement, Pertamina will own 75% of the Dumai CPC Plant and Inalum will own the remaining 25%. The Dumai CPC Plant is expected to supply calcined petroleum coke to the Company's anode plant in Kuala Tanjung as raw material in our aluminium production process, thereby reducing the cost of raw materials and ensuring stability in supply of coke feed to the anode plant, and to have an annual production capacity of 300 ktpa. The Company plans to commence construction of the Dumai CPC Plant by the end of 2020 and expect the plant to be completed and begin commercial production by the end of 2022.

aa. Legal case with PT Perusahaan Toradja ("Perto")

On 24 February 2017, Antam received a lawsuit with case registration number 116/Pdt.G/2017/PN JKT.SEL, with Perto (formerly NV Perto) as the Plaintiff and the Ministry of State-owned Enterprises, MEMR and MoF as Defendants II, III and IV. The essence of the lawsuit is that Perto claims that the government through PT Nikel Indonesia (now Antam) has taken over the mining business and Perto's assets in Pomalaa, Southeast Sulawesi and it has not been fully compensated. The subject of the lawsuit, among others, is the following:

1. To punish the Defendants to fulfil the right, to reimburse and/or pay the total of the Plaintiff's material losses of Rp107,889,043 million;
2. To pay the loss amount equivalent to Rp12,000 million;
3. To declare the security seizures set upon the assets of the First Defendant as legitimate; and
4. To punish Defendant I to pay Rp100,000 million for the costs incurred in the case.

40. SIGNIFICANT AGREEMENTS, COMMITMENTS AND CONTINGENCIES (continued)

aa. Legal case with PT Perusahaan Toradja (“Perto”) (continued)

In August 2018, the South Jakarta District Court has rendered its decision on this case which was favourable to Antam where the Judge concluded that the plaintiff’s claims could not be accepted.

Perto appealed the decision rendered by the South Jakarta Disctrict Court. However, Antam won the case again based on the decision rendered by the DKI Jakarta High Court No. 41/Pdt/2019/PT.DKI. Perto then submitted an appeal for this case to the Supreme Court and Antam has also submitted a counter memory of cassation on 10 June 2019 to the Supreme Court.

As at the issuance date of these consolidated financial statements, the Supreme Court has not yet rendered any decision for the cassation submitted by Perto.

Management believes that the claims from Perto are without merit and will vigorously defend the case. Accordingly, no provision has been recorded for any potential losses arising from the claims.

ab. PPJ

On 31 July 2018, the Regional Tax and Retribution Management Office (“BPPRD”) issued the underpayment of SKPD (“SKPDKB”) PPJ No. 973/5107 regarding the PPJ as amended by SKPDKB No. 973/6180/2018 on 17 September 2018 for the period November 2013 - December 2017 amounting to Rp209,650 million (including penalty). On 19 January 2019, BPPRD issued SKPDKB PPJ for the period January 2018 - November 2018 amounting to Rp31,584 million (including penalty). For those SKPDKB, the Company has recorded taxes payable amounting to Rp241,234 million and charged to the 2018 profit or loss as part of other income, net.

ac. Business cooperation of Special Mining Business Licence Area in North Bahodopi and Matarape blocks

Antam received Direct Appointment Letter No. 1282/30/DJB/2018 dated 1 August 2018 and No. 1393/30/DJB/2018 dated 21 August 2018 from the Directorate General of Mineral and Coal, on behalf of the MEMR, stipulating that Antam has passed and was directly appointed as the winner of the auction for North Bahodopi nickel block in Morowali, Central Sulawesi, and Matarape nickel block in North Konawe, Southeast Sulawesi, the concessions of which were formerly held by PT Vale Indonesia Tbk (“PTVI”).

In order to follow up the letter, Antam made payments of Compensation for Information Data (“KDI”) funds on the Special Mining Business Licence Area (“WIUPK”) of North Bahodopi and Matarape blocks, amounting to Rp184,800 million and Rp184,050 million, respectively, as one of the requirements for submitting a request for IUPK Exploration.

In connection with the appointment of Antam to obtain WIUPK Block Matarape and North Bahodopi Block, the Director General of Mineral and Coal received the Final Reports on Inspection Results No. Registration 0343/IN/VIII/2018/JKT and No. Registration 0344/IN/VIII/2018 from the Indonesian Ombudsman regarding the conversion process of the Matarape Block and the North Bahodopi Block to become a WIUPK and the implementation of priority offers and/or auctions for the two WIUPKs. The reports state that priority offers and/or auctions of the same two areas have been carried out by the Governor of Southeast Sulawesi for the Matarape Block and the Governor of Central Sulawesi for the North Bahodopi Block. The first block was given to BUMD PD Kanasara and the other block was given to PT Pembangunan Sulteng. The Ombudsman then asks the Director General of Mineral and Coal to review the WIUPK conversion process and the priority and/or auction process won by Antam. Antam then submitted a request for follow-up to the issuance of the Matarape Block and North Bahodopi Block IUPKs to the Director General of Mineral and Coal. However, as of the issuance date of these consolidated financial statements, no such IUPKs has been issued.

40. SIGNIFICANT AGREEMENTS, COMMITMENTS AND CONTINGENCIES (continued)

ac. Business cooperation of Special Mining Business Licence Area in North Bahodopi and Matarape blocks (continued)

As of 31 December 2019, the Group recorded the KDI payment as other non-current assets in the consolidated financial statements, pending issuance of the exploration IUPK to the Group.

ad. Release of PTBA Treasury Shares

In May and December 2019, Bukit Asam released 553,893,800 treasury shares amounting to Rp1.9 trillion and 96,093,700 treasury shares amounting to Rp237.6 billion, respectively.

ae. Rent of equipment for tin ore smelting process

The Group entered into rental agreement for tin ore smelting process with several third parties in order to increase production capacity in processing, smelting and/or refining the tin ore. The rental price is based on the usage hours formula of the equipment, the content of SN crude and refined tin produced and the agreed rate based on the agreements.

af. Tin mining services

The Group engaged third parties for tin ore mining services. The total mining services paid are based on the tin ore SN level received by the Group and the predetermined rate based on the Group's policy.

ag. Heads of Agreement between the Company and PTVI

On 11 October 2019, the Company entered into a Heads of Agreement with PTVI, a publicly-listed nickel mining company in Indonesia, and certain PTVI's shareholders, in order to acquire 20% of shares in PTVI. The Company is in the process of negotiating the definitive agreements in relation to the PTVI's share acquisition, planned to be signed by the end of December 2019. Subsequently, on 16 December 2019 and 27 March 2020, the Heads of Agreement was amended to extend the signing date of the definitive agreement, which is planned to be signed by the end of May 2020.

ah. Legal cases related to gold bar deliveries

Antam has been named a defendant in a number of lawsuits related to gold bar sales transactions in Surabaya, where two plaintiffs claimed that they have not received their series of gold orders which have been paid amounting to Rp86,985 million and Rp27,250 million, respectively, and one plaintiff claimed that they Antam has not delivered the purchased gold which has been paid and demanded Antam to pay Rp1,179,087 million for the losses suffered by the plaintiff. All the cases have been filed in the Surabaya District Court.

41. FINANCIAL ASSETS AND FINANCIAL LIABILITIES

As at 31 December 2019, the Group has financial assets which are categorised as loans and receivables consisting of cash and cash equivalents, time deposits, trade receivables, other receivables, and part of other assets totalling Rp28,482,709 million (2018: Rp31,058,808 million and 2017: Rp29,884,318 million) and financial assets which are categorised as available-for-sale financial assets amounting to Rp181,213 million (2018: Rp325,227 million and 2017: Rp7,685,642 million).

As at 31 December 2019, the Group has financial liabilities which are categorised as other financial liabilities consisting of trade payables, accruals, short-term bank borrowings, bond payables, long-term bank borrowings, finance lease liabilities, and part of other liabilities totaling Rp85,325,445 million (2018: Rp82,313,470 million and 2017: Rp19,522,213 million).

(Expressed in millions of Rupiah, unless otherwise stated)

42. MONETARY ASSETS AND LIABILITIES DENOMINATED IN FOREIGN CURRENCIES

	31 December 2019		31 December 2018		31 December 2017	
	Foreign currency in US$	Rupiah	Foreign currency in US$	Rupiah	Foreign currency in US$	Rupiah
Assets						
Cash and cash equivalent and time deposits	723,104,258	10,051,870	726,332,850	10,518,026	566,926,779	7,680,724
Trade receivables, net	235,101,565	3,268,147	237,286,375	3,436,144	295,971,846	4,009,798
Other receivables	33,226,780	461,885	38,276,431	554,281	166,033,785	2,249,425
Available-for-sale financial assets	12,916,800	179,556	11,387,404	164,901	12,043,549	163,166
Other assets	169,320	2,353,719	-	-	-	-
Total monetary assets	1,004,518,723	16,315,177	1,013,283,060	14,673,352	1,040,975,959	14,103,113
Liabilities						
Trade payables	10,979,508	152,625	19,093,018	276,486	17,929,584	242,910
Accruals	10,451,756	145,290	22,927,140	332,008	71,550,018	969,360
Bank borrowings	830,919,202	11,550,607	533,162,489	7,720,726	633,234,224	8,579,057
Bonds payable	4,000,000,000	55,604,000	4,000,000,000	57,924,000	-	-
Finance lease liabilities	19,016,121	264,343	30,820,523	446,312	-	-
Total monetary liabilities	4,871,366,587	67,716,865	4,606,003,170	66,699,532	722,713,826	9,791,327
Total net monetary (liabilities)/ assets in foreign currency	**(3,866,847,864)**	**(51,401,688)**	**(3,592,720,110)**	**(52,026,180)**	**318,262,133**	**4,311,786**

As at 31 December 2019, if the monetary assets and liabilities in foreign currencies had been translated based on the exchange rates as at the date of these consolidated financial statements, the net monetary liabilities would increase by approximately Rp59,947,742 million.

43. FINANCIAL RISK MANAGEMENT

(1) Financial risk factors

The Group's activities expose it to a variety of financial risks, including the effects of foreign currency exchange rates, commodity prices and interest rates. The Group's overall risk management system focuses on the unpredictability of commodity prices in financial markets and seeks to minimise potential adverse effects on the financial performance of the Group.

Risk management is carried out by the risk management task force that is directly responsible to the Board of Directors. The Board ensures the sufficiency of all procedures and methodology of financial risk management, which consists of accuracy of risk identification, measurement, monitoring and financial risk control.

a. Commodity price risks

Commodity prices are very unstable due to changes in supply and demand from customers. Currently, there is a high risk that prices of the Group's products (i.e. coal, gold, tin, aluminium, ferronickel) will fluctuate significantly. Although the Group has diversified customers and does not depend on a specific market or country, the Group's revenue could be negatively impacted by the decrease in commodity prices.

The Group believes that the fastest way to manage the commodity price risk is by decreasing the production costs. The Group has plans to continuously reduce its costs by, among other things, revitalising its production facilities and its commitment to use a cheaper fuel sources, such as natural gas, coal, or hydro power. In addition, the Group also uses average prices for certain period to sell some of its products.

b. Foreign currency risk

Foreign currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The Group's exposure to exchange rate fluctuations results primarily from cash and cash equivalents, time deposits, trade receivables, other receivables, other tax receivables, trade payables, bonds payable, other liabilities, accruals and bank borrowings.

(Expressed in millions of Rupiah, unless otherwise stated)

43. FINANCIAL RISK MANAGEMENT (continued)

(1) Financial risk factors (continued)

b. Foreign currency risk (continued)

The linkage of the price fluctuations of the Group's products following the prices traded on international markets with the fluctuations in currency exchange rates is considered a natural hedge for reducing the Group's foreign currency risk.

If the Rupiah weakens or strengthens by 5% as compared to the US Dollar or vice versa, on 31 December 2019 (assuming all other variables remain unchanged), the consolidated profit before tax of the Group for the year ended 31 December 2019, 2018 and 2017 will increase or decrease approximately by Rp2,687,651 million, Rp2,601,309 million and Rp318,773 million, respectively, mainly as a result of foreign exchange gains or losses on the translation of the net assets/(liabilities) denominated in foreign currency as at the reporting date.

c. Interest rate risk

Interest rate risk is the risk that the fair value or the future cash flows of a financial instrument will fluctuate because of changes in market interest rates. The Group is exposed to the risk of changes in market interest rates that relate primarily to its cash and cash equivalents and time deposits, bank borrowings, and finance lease liabilities.

Various scenarios are simulated taking into consideration refinancing, renewal of existing positions, alternative financing and hedging if necessary. Based on these scenarios, the Group calculates the impact on profit or loss at a defined interest rate shift.

Sensitivity analysis for interest rate risk

As at 31 December 2019, there is no significant interest rate risk due to the fact that most of the interest rates from the borrowings are fixed. In addition, the interest rate risk from the time deposit is low. This was reflected by the return on time deposits during the years ended 31 December 2019, 2018 and 2017 which were relatively stable.

d. Credit risk

Credit risk is the risk that the counterparty will fail to discharge its contractual obligation.

The Group has put in place credit policies and procedures to ensure ongoing credit evaluation and active account monitoring. The Group manages its credit risk exposure from its deposits in banks by monitoring banks reputations, credit ratings and limiting the aggregate risk to any individual counterparty. In order to manage the credit risk related to trade receivables, the Group trades only with recognised and creditworthy third parties. It is the Group's policy that all customers who wish to trade on credit terms are subject to credit verification procedures and terms of payment either through Surat Kredit Berdokumen Dalam Negeri ("SKBDN") or a letter of credit and have clear policies on the selection of customers, as well as having legally binding agreements in place for mineral commodity transactional sales. In addition, receivable balances are monitored on an ongoing basis in order to reduce the exposure to bad debts.

The balances of the trade receivables and other receivables are as follows:

			Net amount		
	Gross amount	Impaired	Neither past due nor impaired	Past due but not impaired	Net amount
31 December 2019					
Trade receivables	6,863,432	(536,879)	5,048,885	1,277,668	6,326,553
Other receivables					
- Third parties	775,263	(114,509)	660,754	-	660,754
- Related parties	232,785	(118,457)	23,953	90,375	114,328
Total	7,871,480	(769,845)	5,733,592	1,368,043	7,101,635

(Expressed in millions of Rupiah, unless otherwise stated)

43. FINANCIAL RISK MANAGEMENT (continued)

(1) Financial risk factors (continued)

d. Credit risk (continued)

	Gross amount	Impaired	Net amount: Neither past due nor impaired	Net amount: Past due but not impaired	Net amount
31 December 2018					
Trade receivables	6,995,779	(367,348)	5,669,834	958,597	6,628,431
Other receivables					
- Third parties	785,255	(26,253)	300,883	458,119	759,002
- Related parties	189,732	(96,051)	18,381	75,300	93,681
Total	**7,970,766**	**(489,652)**	**5,989,098**	**1,492,016**	**7,481,114**
31 December 2017					
Trade receivables	8,662,157	(371,267)	7,092,685	1,198,205	8,290,890
Other receivables					
- Third parties	1,055,327	-	654,944	400,383	1,055,327
- Related parties	1,615,289	(41,704)	15,674	1,557,911	1,573,585
Total	**11,332,773**	**(412,971)**	**7,763,303**	**3,156,499**	**10,919,802**

e. Liquidity risk

Liquidity risk is the risk that the Group is unable to meet its obligations when they are due. The Group has reviewed, monitored and set the policy of terms of payments in accordance with the proceeds from the Group's sales. In general, funding to pay the due obligations comes from the settlement of trade receivables from customers, cash and cash equivalents as well as the time deposits of the Group and flexibility through bank loans and other borrowings.

The table below summarises the maturity profile of the Group's financial liabilities based on the contractual payment maturities.

	Less than 3 months	3 months - 1 year	1 - 5 years	More than 5 years	Total
31 December 2019					
Trade payables	4,066,497	98,528	-	-	4,165,025
Accruals	1,966,077	1,630,180	-	-	3,596,257
Employee bonus and *tantiem*	1,160,371	-	-	-	1,160,371
Financial lease liabilities	60,256	136,347	334,697	-	531,300
Bank borrowings	7,869,811	4,912,557	3,438,489	2,198,752	18,419,609
Bonds payable	47,513	663,338	38,489,944	30,503,833	69,704,628
Other current liabilities	1,014,811	-	-	-	1,014,811
Other non-current liabilities	-	-	6,916	-	6,916
Total	**16,185,336**	**7,440,950**	**42,270,046**	**32,702,585**	**98,598,917**

(Expressed in millions of Rupiah, unless otherwise stated)

43. FINANCIAL RISK MANAGEMENT (continued)

(1) Financial risk factors (continued)

e. Liquidity risk (continued)

	Less than 3 months	3 months - 1 year	1 - 5 years	More than 5 years	Total
31 December 2018					
Trade payables *)	3,949,986	-	-	-	3,949,986
Accruals *)	3,264,869	1,274,197	-	-	4,539,066
Employee bonus and *tantiem*	1,546,636	-	-	-	1,546,636
Financial lease liabilities	-	300,696	258,935	-	559,631
Bank borrowings	1,750,075	5,916,969	5,218,709	895,523	13,781,276
Bonds payable	47,513	142,538	38,345,368	27,021,220	65,556,639
Other current liabilities	1,216,146	-	-	-	1,216,146
Other non-current liabilities	-	-	18,180	-	18,180
Total	11,775,225	7,634,400	43,841,192	27,916,743	91,167,560

	Less than 3 months	3 months - 1 year	1 - 5 years	More than 5 years	Total
31 December 2017					
Trade payables	2,525,160	-	-	-	2,525,160
Accruals	2,715,055	-	-	-	2,715,055
Employee bonus and *tantiem*	921,738	-	-	-	921,738
Financial lease liabilities	-	148,968	546,982	-	695,950
Bank borrowings	2,908,155	2,883,513	2,252,424	1,658,527	9,702,619
Bonds payable	99,043	1,194,004	6,183,378	-	7,476,425
Other current liabilities	287,679	643	-	-	288,322
Other non-current liabilities	-	-	3,762	-	3,762
Total	9,456,830	4,227,128	8,986,546	1,658,527	24,329,031

(2) Capital management

The Group aims to achieve an optimal capital structure in pursuit of its business objectives, which include maintaining healthy capital ratios and maximising shareholder value.

The Directors of the Group periodically review the Group's capital structure. As part of this review, the Board of Directors consider the cost of capital and the related risks and direction from shareholders.

Consistent with other entities in the industry, the Group monitors capital on the basis of the debt-to-equity ratio. This ratio is calculated as debt divided by total capital. Debt is calculated as total liabilities as shown in the consolidated statement of financial position. Total capital is the equity that is shown in the consolidated statements of financial position.

The debt-to-equity ratios of the Group are as follows:

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Total liabilities	93,052,254	90,332,676	27,237,455
Total equity	71,790,778	74,226,117	64,772,944
Debt-to-equity ratio	**1.30:1**	**1.22:1**	**0.42:1**

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

43. FINANCIAL RISK MANAGEMENT (continued)

(3) Fair value estimation

Fair value is the amount for which an asset could be exchanged or a liability settled between knowledgeable and willing parties in an arm's length transaction.

Financial instruments that are measured at fair value at the consolidated statement of financial position date and the corresponding fair value are disclosed by the level of the following fair value measurement hierarchy:

- Level 1: quoted prices (unadjusted) in active markets for identical liabilities.

- Level 2: inputs other than the quoted prices included within level 1 that are observable for the liability, either directly (as prices) or indirectly (derived from prices).

- Level 3: inputs for liabilities that are not based on observable market data (unobservable inputs).

Management considers that the carrying amounts of the current financial assets and the financial liabilities recorded at amortised cost in the consolidated financial statements approximate their fair values because of their short-term maturities. The information related to the fair value of non-current assets and liabilities has been explained in the respective notes to the consolidated financial statements.

44. CASH FLOW INFORMATION

a. Non-cash transactions

	31 December 2019	31 December 2018	31 December 2017
Acquisition of fixed assets from (decrease)/ increase of payables and accruals	(378,265)	561,433	811,091
Acquisition of fixed assets through finance lease	169,948	49,498	-
Capitalisation of VAT as fixed assets	100,861	-	-
Non-cash addition of investment properties	52,765	-	-
Capitalisation of borrowing cost to fixed assets	34,133	8,358	23,495
Accruals of acquisition cost	-	115,892	-
Decrease in long-term contingent liabilities through decrease in dividend receivable	-	5,642	-
Issuance of new shares related to business combination of entities under common control	-	-	41,491,252
Addition of financial assets available-for-sale through additional paid-up share capital	-	-	7,255,450
Fixed asset addition through additional paid-up share capital	-	-	5,049,241
	(20,558)	740,823	54,630,529

(Expressed in millions of Rupiah, unless otherwise stated)

44. CASH FLOW INFORMATION (continued)

b. Reconciliation of liabilities arising from financing activities

	31 December 2019							
	Beginning balance	Proceeds from financing	Repayment of financing	Transaction costs	Unamortised costs	Foreign exchange loss	Acquisition	Ending balance
Bonds payable	59,807,717	1,193,000	-	-	208,374	(2,320,000)	-	58,889,091
Bank borrowings	12,786,359	60,485,304	(55,636,077)	(19,440)	5,788	(308,149)	-	17,313,785
Finance lease liabilities	513,423	172,418	(193,531)	-	-	(21,806)	-	470,504
Other liabilities	368,850	-	-			-	-	368,850
Total	**73,476,349**	**61,850,722**	**(55,829,608)**	**(19,440)**	**214,162**	**(2,649,955)**	**-**	**77,042,230**

	31 December 2018							
	Beginning balance	Proceeds from financing	Repayment of financing	Transaction costs	Unamortised costs	Foreign exchange gain/(loss)	Acquisition	Ending balance
Bonds payable	4,496,841	57,924,000	(900,000)	(1,731,841)	18,717	-	-	59,807,717
Bank borrowings	8,928,940	38,609,030	(36,242,169)	(2,354)	2,334	569,414	921,164	12,786,359
Finance lease liabilities	638,486	60,034	(180,217)	-	-	(4,880)	-	513,423
Other liabilities	-	368,850	-			-	-	368,850
Total	**14,064,267**	**96,961,914**	**(37,322,386)**	**(1,734,195)**	**21,051**	**564,534**	**921,164**	**73,476,349**

	31 December 2017							
	Beginning balance	Proceeds from financing	Repayment of financing	Transaction costs	Unamortised costs	Foreign exchange gain	Acquisition	Ending balance
Bonds payable	2,995,896	1,500,000	-	-	945	-	-	4,496,841
Bank borrowings	10,247,965	7,081,729	(8,465,435)	-	2,388	62,293	-	8,928,940
Finance lease liabilities	762,597	-	(126,342)	-	-	2,231	-	638,486
Total	**14,006,458**	**8,581,729**	**(8,591,777)**	**-**	**3,333**	**64,524**	**-**	**14,064,267**

45. BASIC AND DILUTED EARNINGS PER SHARE

	31 December 2019	31 December 2018 *)	31 December 2017 *)
(Loss)/profit for the year attributable to owner of the parent entity	(1,200,391)	8,411,335	4,270,046
The number of ordinary shares outstanding (full amount)	130,549,256	130,549,256	130,549,256
Basic and diluted (loss)/earnings per share attributable to owner of the parent entity (full amount)	**(9,195)**	**64,430**	**32,708**

(Expressed in millions of Rupiah, unless otherwise stated)

46. NON-CONTROLLING INTERESTS

As at 31 December 2019, 2018 and 2017, the non-controlling interests of Bukit Asam, Timah and Antam are as follows:

	31 December 2019	31 December 2018 *)	31 December 2017 *)
Bukit Asam	6,001,474	5,891,164	4,952,003
Antam	5,388,937	5,521,308	5,259,107
Timah	1,823,789	2,087,611	2,086,451
Total	**13,214,200**	**13,500,083**	**12,297,561**

The summarised statements of financial position as at 31 December 2019, 2018 and 2017 are as follows:

	31 December 2019				
	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Net assets
Bukit Asam	11,679,884	14,418,168	(4,691,251)	(2,983,975)	18,422,826
Antam	7,665,239	22,529,668	(5,293,238)	(6,768,250)	18,133,419
Timah	12,307,055	8,054,223	(11,958,185)	(3,144,688)	5,258,405
Total	**31,652,178**	**45,002,059**	**(21,942,674)**	**(12,896,913)**	**41,814,650**

	31 December 2018 *)				
	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Net assets
Bukit Asam	11,426,678	12,746,255	(4,935,696)	(2,967,541)	16,269,696
Antam	7,342,041	24,853,310	(5,561,931)	(8,185,053)	18,448,367
Timah	9,016,657	6,204,028	(6,635,425)	(2,436,908)	6,148,352
Total	**27,785,376**	**43,803,593**	**(17,133,052)**	**(13,589,502)**	**40,866,415**

	31 December 2017 *)				
	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Net assets
Bukit Asam	11,117,745	10,869,737	(4,396,619)	(3,790,878)	13,799,985
Antam	8,338,152	20,460,484	(5,548,616)	(6,086,901)	17,163,119
Timah	6,907,380	4,811,344	(3,261,103)	(2,412,290)	6,045,331
Total	**26,363,277**	**36,141,565**	**(13,206,338)**	**(12,290,069)**	**37,008,435**

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

46. NON-CONTROLLING INTERESTS (continued)

The summarised statements of profit or loss and other comprehensive income for the years ended 31 December 2019, 2018 and 2017 are as follows:

	31 December 2019					
	Net revenue	Profit/(loss) for the year	Other comprehensive loss for the year	Total comprehensive income/(loss) for the year	Comprehensive income/(loss) attributable to non-controlling interests	Dividends paid to non-controlling interests
Bukit Asam	21,787,564	4,040,394	(197,056)	3,843,338	1,298,551	1,188,241
Antam	32,718,543	193,852	(202,750)	(8,898)	(25,254)	107,117
Timah	19,302,627	(611,284)	(92,687)	(703,971)	(198,732)	65,090
Total	**73,808,734**	**3,622,962**	**(492,493)**	**3,130,469**	**1,074,565**	**1,360,448**

	31 December 2018 *)					
	Net revenue	Profit for the year	Other comprehensive income/(loss) for the year	Total comprehensive income for the year	Comprehensive income attributable to non-controlling interests	Dividends paid to non-controlling interests
Bukit Asam	21,166,993	5,121,112	740,459	5,861,571	2,113,555	1,174,394
Antam	25,275,246	1,636,003	(302,978)	1,333,025	278,929	16,728
Timah	11,016,677	132,285	146,582	278,867	62,706	61,546
Total	**57,458,916**	**6,889,400**	**584,063**	**7,473,463**	**2,455,190**	**1,252,668**

	31 December 2017 *)					
	Net revenue	Profit/(loss) for the year	Other comprehensive income/(loss) for the year	Total comprehensive income/(loss) for the year	Comprehensive income/(loss) attributable to non-controlling interests	Dividends paid to non-controlling interests
Bukit Asam	19,471,030	4,547,232	(687,830)	3,859,402	1,396,045	-
Antam	12,653,619	(873,231)	50,139	(823,092)	(288,085)	-
Timah	9,217,160	473,916	(19,059)	454,857	159,191	-
Total	**41,341,809**	**4,147,917**	**(656,750)**	**3,491,167**	**1,267,151**	**-**

*) As restated (refer to Note 49)

The summarised statements of cash flows of Bukit Asam for the years ended 31 December 2019, 2018 and 2017 are as follows:

	31 December 2019	31 December 2018	31 December 2017
Net cash received from operating activities	4,296,479	7,867,786	2,415,444
Net cash used in investing activities	(3,784,778)	(1,576,781)	(536,264)
Net cash used in financing activities	(2,033,191)	(3,585,132)	(2,006,843)
Net (decrease)/increase in cash and cash equivalents	(1,521,490)	2,705,873	(127,663)
Cash and cash equivalents at the beginning of the year	6,301,163	3,555,406	3,674,687
Effects of exchange rate changes on cash and cash equivalents	(22,872)	39,884	8,382
Cash and cash equivalents at the end of the year	**4,756,801**	**6,301,163**	**3,555,406**

(Expressed in millions of Rupiah, unless otherwise stated)

46. NON-CONTROLLING INTERESTS (continued)

The summarised statements of cash flows of Timah for the years ended 31 December 2019, 2018 and 2017 are as follows:

	31 December 2019	31 December 2018 *)	31 December 2017
Net cash used in operating activities	(2,080,269)	(1,261,639)	(148,667)
Net cash used in investing activities	(1,507,131)	(1,254,063)	(806,172)
Net cash received from financing activities	4,436,952	1,921,991	1,754,781
Net increase/(decrease) in cash and cash equivalents	849,552	(593,711)	799,942
Cash and cash equivalents at the beginning of the year	784,610	1,357,490	563,804
Reclassified (to)/from assets of disposal group classified as held for sale	(6,288)	5,801	(4,376)
Effects of exchange rate changes on cash and cash equivalents	(28,504)	15,030	(1,880)
Cash and cash equivalents at the end of the year	**1,599,370**	**784,610**	**1,357,490**

*) As restated (refer to Note 49)

The summarised statements of cash flows of Antam for the years ended 31 December 2019, 2018 and 2017 are as follows:

	31 December 2019	31 December 2018	31 December 2017
Net cash received from operating activities	1,633,837	1,874,578	1,379,176
Net cash used in investing activities	(885,313)	(2,593,809)	(2,890,561)
Net cash used in financing activities	(1,363,160)	(619,760)	(568,358)
Net decrease in cash and cash equivalents	(614,636)	(1,338,991)	(2,079,743)
Cash and cash equivalents at the beginning of the year	4,299,068	5,550,677	7,623,385
Effects of exchange rate changes on cash and cash equivalents	(48,189)	87,382	7,035
Cash and cash equivalents at the end of the year	**3,636,243**	**4,299,068**	**5,550,677**

47. OPERATING SEGMENT INFORMATION

Management has determined the operating segments based on the reports reviewed by the Board of Directors that are used to make strategic decisions. The Board of Directors considers the business operations from both the perspective of the business type. The Group's business segments can be classified into six major business operations, consisting of (a) Coal; (b) Gold and other precious metals; (c) Aluminium; (d) Tin metal and tin solder; (e) Nickel and ferronickel; and (f) Others. Other operations primarily consist of trading, purification of metals, construction, mining services and plantation business services. All transactions between the segments have been eliminated.

The Board of Directors uses the measure of net sales to assess the performance of the operating segments.

(Expressed in millions of Rupiah, unless otherwise stated)

47. OPERATING SEGMENT INFORMATION (continued)

The information concerning the segments for the years ended 31 December 2019, 2018 and 2017 is as follows:

31 December 2019									
Segment	Coal	Gold and other precious metals	Aluminium	Tin metals and solder	Nickel and ferronickel	Others	Home office	Elimination	Total
Net sales	21,442,167	22,744,331	6,822,205	31,481,887	8,577,402	6,076,842	-	(16,516,172)	80,628,662
Operating profit/(loss)	4,801,762	486,583	66,310	95,535	2,101,252	(616,824)	(994,815)	(168,053)	5,771,750
Finance income	370,752	9,142	1,234,067	26,894	2,652	30,100	104,005	(907,449)	870,163
Finance costs	(24,845)	(6,215)	(4,217,870)	(749,610)	(27,469)	(1,092,562)	(168,133)	986,364	(5,300,340)
Share of profit/(loss) from PTFI, associates and joint ventures	178,798	-	-	(8,991)	-	-	(88,099)	(565,648)	(483,940)
Other income/ (expense), net	-	32,395	4,211,942	168,292	20,646	48,379	(101,839)	(2,971,567)	1,408,248
Income tax expenses/(benefits)	(1,296,496)	-	(447,029)	113,638	-	(118,272)	(493,182)	-	(2,241,341)
Profit/(loss) for the year	4,029,971	521,905	847,420	(354,242)	2,097,081	(1,749,179)	(1,742,063)	(3,626,353)	24,540
Segment assets	24,479,327	2,755,471	99,190,658	21,804,124	10,876,114	10,764,128	9,783,514	(83,259,492)	96,393,844
Segment investment in PTFI, associates and joint ventures	2,981,233	-	33,518,916	1,384,858	-	29,552,856	744,530	266,795	68,449,188
Segment liabilities	7,251,226	43,017	58,780,728	17,374,936	941,565	18,937,586	9,945,385	(20,222,189)	93,052,254
Capital expenditures	1,101,784	81,076	758,677	1,172,451	620,282	974,419	18,608	-	4,727,297
Depreciation and amortisation	620,717	281,245	384,455	765,793	489,729	575,038	13,054	-	3,130,031

31 December 2018 *)									
Segment	Coal	Gold and other precious metals	Aluminium	Tin metals and solder	Nickel and ferronickel	Others	Home office	Elimination	Total
Net sales	21,150,935	18,211,232	7,802,337	18,890,702	7,912,614	4,117,685	-	(12,808,076)	65,277,429
Operating profit/(loss)	6,051,724	391,180	1,317,729	124,924	2,262,005	557,050	(1,133,386)	(613,928)	8,957,298
Finance income	321,854	7,220	429,283	38,919	1,447	6,302	229,435	(23,934)	1,010,526
Finance costs	(45,530)	(573,606)	(533,586)	(352,812)	(12,154)	(207,669)	(585,914)	190,620	(2,120,651)
Share of profit/(loss) from PTFI, associates and joint ventures	352,346	-	-	8,123	-	-	(1,260,022)	189,946	(709,607)
Other income/ (expense), net	333,488	(10,210)	3,735,289	4,707	30,753	1,314,509	1,531,065	(228,752)	6,710,849
Income tax expenses	(238,110)	-	(813,502)	(32,665)	-	(156,183)	(438,669)	(1,342,674)	(3,021,803)
Profit/(loss) for the year	6,775,772	(185,416)	4,135,213	(208,804)	2,282,051	1,514,009	(1,657,491)	(1,828,722)	10,826,612
Segment assets	24,306,631	3,910,102	79,533,822	16,478,215	11,148,295	13,974,059	14,665,024	(68,888,660)	95,127,488
Segment investment in PTFI, associates and joint ventures	2,621,506	-	63,613,258	1,327,379	-	29,627,423	1,145,223	(28,903,484)	69,431,305
Segment liabilities	8,449,722	1,059,844	59,828,036	11,270,344	990,547	20,496,905	10,839,303	(22,602,025)	90,332,676
Capital expenditures	806,891	302,572	519,446	1,070,521	49,438	464,549	1,920,724	-	5,134,141
Depreciation and amortisation	550,620	302,705	328,079	511,298	527,217	317,407	9,089	-	2,546,415

*) As restated (refer to Note 49)

(Expressed in millions of Rupiah, unless otherwise stated)

47. OPERATING SEGMENT INFORMATION (continued)

31 December 2017 *)									
Segment	Coal	Gold and other precious metals	Aluminium	Tin metals and solder	Nickel and ferronickel	Others	Home office	Elimination	Total
Net sales	19,720,150	8,844,511	5,842,474	16,287,414	4,847,454	2,692,466	-	(11,050,186)	47,184,283
Operating profit/(loss)	5,965,536	107,360	1,653,452	788,690	1,065,944	76,684	(608,090)	91,399	9,140,975
Finance income	179,544	5,337	160,472	24,646	1,788	7,646	250,427	-	629,860
Finance costs	(40,143)	-	-	(200,412)	-	(106,183)	(694,900)	42,526	(999,112)
Share of profit/(loss) from PTFI, associates and joint ventures	-	-	-	11,791	-	121,803	(1,254,655)	-	(1,121,061)
Other income/ (expense), net	(284,420)	(110,718)	233,726	142,733	(25,858)	(116,575)	582,951	168,807	590,646
Income tax expenses	(5,923)	-	(428,644)	(207,297)	-	(29,050)	(317,893)	(1,485,578)	(2,474,385)
Profit/(loss) for the year	5,814,594	1,979	1,619,006	560,151	1,041,874	(45,675)	(2,042,160)	(1,182,846)	5,766,923
Segment assets	21,948,289	1,624,460	24,575,523	12,781,154	10,999,807	7,325,827	19,247,770	(10,650,477)	87,852,353
Segment investment in PTFI, associates and joint ventures	1,498,427	-	3,994	1,147,473	-	4,834	2,524,528	(1,021,210)	4,158,046
Segment liabilities	7,734,481	718,369	1,848,914	7,293,522	794,958	4,051,090	10,432,866	(5,636,745)	27,237,455
Capital expenditures	1,053,368	254,072	6,503,641	654,438	323,793	170,232	1,286,267	-	10,245,811
Depreciation and amortisation	526,744	300,910	275,528	478,560	422,292	241,144	5,245	-	2,250,423

*) As restated (refer to Note 49)

48. EVENTS AFTER THE REPORTING PERIOD

a. Investment loans

On 5 February 2020, Timah entered into loan agreements with MUFG and LPEI with credit facilities amounting to US$32 million and US$41.5 million, respectively. The loan bears London Interbank Offered Rate ("LIBOR") interest rate plus certain margin. The loan facility will be used for capital expenditures related to Ausmelt Project. The maturity date of the loans are 120 and 96 months, respectively, from the date these agreements were signed.

b. Working capital loans

In 2020, Antam and Timah has extended the working capital facilities from several banks as follows:

Creditor	Facility type	Facility (full amount)	Maturity period	Annual interest rate
Panin	Working capital loan	Rp20,000,000,000	October 2020	LPS + 3%
Bank Mandiri (Europe) Ltd.	Receivable financing	US$12,000,000	February 2021	2.75%
BRI	Supply Chain Financing Accounts Payable facilities	Rp300,000,000,000	November 2020	7.90%
DBS	Uncommited revolving credit sub-facility	US$10,000,000	May 2020	COF + 1%
	Uncommited receivable facility	US$30,000,000	May 2020	LIBOR + 2%

c. Construction contract with WIKA

In January 2020, Timah and WIKA signed an Engineering, Procurement, Construction & Commissioning Work Agreement for Ausmelt Project with a capacity of 40,000 tons of crude tin in order to provide preparatory work, detailed engineering design, procurement of equipment and materials, fabrication and trial work, training and commissioning and operation test. The value of this contract is Rp796 billion.

48. EVENTS AFTER THE REPORTING PERIOD (continued)

d. Impact of COVID-19 pandemic

Subsequent to 31 December 2019, there has been a decrease in economic activity as a result of COVID-19 outbreak severely affecting among others global demand for products and services, as well as supply chains. Due to uncertainties involved with this event, the financial impact to the Group's operations are difficult to predict at this moment. The extent to which COVID-19 will impact the Group's operations will depend on future developments, which are highly uncertain and cannot be predicted with confidence, including scope, severity and duration of the outbreak, actions taken to contain COVID-19 or mitigate its impact, among others. The Group may experience negative impacts from this event should the Government decide to apply national lock-down for a prolonged period.

During the first quarter of 2020, gold prices have shown an increasing trend while tin metal, nickel and aluminium prices on the contrary showed a decreasing trend. The decline of the Group's products price may significantly impact the value of inventories along with profitability of the Group as the spot price at year end has been mainly used for the determination of the net realisable value of the current portion of tin inventories. In addition, it may impact the recoverability of the non-financial assets.

Also, the Indonesian Rupiah has significantly weakened against the US Dollars. Since the Group has significant borrowings in USD, this has resulted into higher foreign exchange loss recognised by the Group in the first quarter of 2020.

Management will continue to monitor this event and take necessary action to address the related risks and uncertainties going forward.

e. Government Regulation in Lieu of Law ("Perppu") No. 1 Year 2020

In March 2020, the GoI issued Perppu No. 1 Year 2020, which articulated its policy on maintaining the stability of state finances and the financial system in light of the COVID-19 pandemic and other threats that might endanger the national economy. Perppu No. 1 Year 2020 stipulates that the income tax for corporations to be set at a rate of 22% for fiscal year 2020 and 2021 and further reduced to 20% for fiscal year 2022 onward. Management is evaluating the impact of this regulation that will be applied prospectively.

f. Capital expenditure payment to PTFI

In January 2020, the Inalum Group made a capital expenditure payment to PTFI amounting to US$32,250,000 or equivalent to Rp441,116 million in accordance with the Shareholder Agreement. The payment is made using the proceeds from long-term bank borrowings from Mandiri.

49. RESTATEMENT AND RECLASSIFICATION OF FINANCIAL STATEMENTS

In preparing the Group's consolidated financial statements as at and for the year ended 31 December 2019, management reconsidered the interpretation of facts, circumstances and the applicable accounting treatment and determined that restatements of the Group's consolidated financial statements as at and for the years ended 31 December 2018 and 2017 were necessary.

(Expressed in millions of Rupiah, unless otherwise stated)

49. RESTATEMENT AND RECLASSIFICATION OF FINANCIAL STATEMENTS (continued)

The impact of the restatement and reclassification adjustments to the Group's profit for the years ended 31 December 2018 and 2017 and to the Group's equity as at 31 December 2018 and 2017 are summarised below:

	2018		31 December 2018	2017		31 December 2017
	Profit for the year	Other compre-hensive income	Equity	Profit for the year	Other compre-hensive income	Equity
Previously reported	**10,630,274**	**2,527,510**	**75,992,640**	**6,805,157**	**(538,502)**	**66,007,274**
Restatements						
A. Under recorded expenses	(609,315)	-	(709,884)	(28,501)	-	(100,569)
B. Investment in associates and joint ventures	778,047	(728,531)	48,060	(841,504)	105,035	(1,456)
C. Improper capitalisation of certain expenditures	42,730	-	(400,097)	(32,640)	-	(442,827)
D. Estimation of precious metal reserves	8,262	-	(522,421)	23,206	-	(530,683)
E. Estimation of gold content in low grade concentrate	(23,386)	-	(182,181)	(158,795)	-	(158,795)
	196,338	**(728,531)**	**(1,766,523)**	**(1,038,234)**	**105,035**	**(1,234,330)**
As restated	**10,826,612**	**1,798,979**	**74,226,117**	**5,766,923**	**(433,467)**	**64,772,944**

A summary of the significant effects of the restatement and reclassification adjustments to the Group's consolidated statements of financial position as at 31 December 2018 and 2017 and consolidated statements of profit or loss and other comprehensive income for the years ended 31 December 2018 and 2017 are as follows:

	Previously reported	Reclassification	Notes	Restatement	As restated
CONSOLIDATED STATEMENT OF FINANCIAL POSITION					
31 December 2018					
CURRENT ASSETS					
Inventories	10,314,631	-	A, E	(330,548)	9,984,083
Prepaid taxes					
- Corporate income taxes	380,930	(19,635)	II	-	361,295
- Other taxes	2,644,555	(958,707)	II	-	1,685,848
Total current assets	45,085,189	(978,342)		(330,548)	43,776,299
NON-CURRENT ASSETS					
Inventories	646,250	-	A	(11,997)	634,253
Investment in associates	1,337,022	-	B.1	48,060	1,385,082
Exploration and evaluation assets	670,170	71,553	I, D	(34,967)	706,756
Fixed assets	39,661,946	-	C, D	(729,630)	38,932,316
Mining properties	2,790,745	(71,553)	I, D	(87,349)	2,631,843
Prepaid taxes					
- Corporate income taxes	617,474	(105,657)	II, A	149,370	661,187
- Other taxes	255,793	1,083,999	II, A	(52,263)	1,287,529
Deferred tax assets	2,445,086	-	D	(70,572)	2,374,514
Total non-current assets	120,593,500	978,342		(789,348)	120,782,494
TOTAL ASSETS	**165,678,689**	**-**		**(1,119,896)**	**164,558,793**

(Expressed in millions of Rupiah, unless otherwise stated)

49. RESTATEMENT AND RECLASSIFICATION OF FINANCIAL STATEMENTS (continued)

	Previously reported	Reclassification	Notes	Restatement	As restated
CONSOLIDATED STATEMENT OF FINANCIAL POSITION					
31 December 2018					
CURRENT LIABILITIES					
Trade payables	3,486,203	-	A	463,783	3,949,986
Accruals	4,377,257	-	A	161,809	4,539,066
Taxes payable					
- Corporate income taxes	558,655	(329,582)	II, A	(9,634)	219,439
- Other taxes	477,836	329,582	II, A	30,669	838,087
Total current liabilities	19,951,262	-		646,627	20,597,889
TOTAL LIABILITIES	**89,686,049**	**-**		**646,627**	**90,332,676**
EQUITY					
Additional paid-in capital	(18,199,606)	-	A, B.2, C, D, E	(802,314)	(19,001,920)
Retained earnings					
- Unappropriated	11,000,320	6,154	III, A, B.1, B.2, C, D, E	288,107	11,294,581
Other comprehensive income	-	(6,154)	III	-	(6,154)
Currency differences from translation of the Group's entity financial statements	14,294,178	-	B.1, B.2	(634,032)	13,660,146
Total equity attributable to owner of the parent entity	**61,874,273**	**-**		**(1,148,239)**	**60,726,034**
Non-controlling interest	14,118,367	-	A, B.2, C, D, E	(618,284)	13,500,083
TOTAL EQUITY	**75,992,640**	**-**		**(1,766,523)**	**74,226,117**
TOTAL LIABILITIES AND EQUITY	**165,678,689**	**-**		**(1,119,896)**	**164,558,793**
31 December 2017					
CURRENT ASSETS					
Inventories	6,724,621	-	A, E	(259,364)	6,465,257
Prepaid taxes					
- Corporate income taxes	201,481	(41,753)	II	-	159,728
- Other taxes	1,497,067	(463,239)	II	-	1,033,828
Total current assets	37,463,082	(504,992)		(259,364)	36,698,726
NON-CURRENT ASSETS					
Investment in joint ventures	2,160,516	-	B.2	(1,456)	2,159,060
Exploration and evaluation assets	665,322	71,553	I, D	(29,163)	707,712
Fixed assets	32,115,515	-	C, D	(777,193)	31,338,322
Mining properties	2,366,199	(71,553)	I, D	(98,808)	2,195,838
Prepaid taxes					
- Other taxes	441,694	504,992	II	-	946,686
Deferred tax assets	2,714,415	-	D	(68,346)	2,646,069
Total non-current assets	55,781,647	504,992		(974,966)	55,311,673
TOTAL ASSETS	**93,244,729**	**-**		**(1,234,330)**	**92,010,399**

(Expressed in millions of Rupiah, unless otherwise stated)

49. RESTATEMENT AND RECLASSIFICATION OF FINANCIAL STATEMENTS (continued)

	Previously reported	Reclassification	Notes	Restatement	As restated
CONSOLIDATED STATEMENT OF FINANCIAL POSITION					
31 December 2017					
CURRENT LIABILITIES					
Taxes payable					
- Corporate income taxes	968,455	(248,622)	II	-	719,833
- Other taxes	80,908	248,622	II	-	329,530
Total current liabilities	15,125,792	-		-	15,125,792
TOTAL LIABILITIES	**27,237,455**	**-**		**-**	**27,237,455**
EQUITY					
Additional paid-in capital	(18,199,606)	-	A, B.2, C, D, E	(802,314)	(19,001,920)
Total equity attributable to owner of the parent entity	**53,277,697**	**-**		**(802,314)**	**52,475,383**
Non-controlling interest	12,729,577	-	A, B.2, C, D, E	(432,016)	12,297,561
TOTAL EQUITY	**66,007,274**	**-**		**(1,234,330)**	**64,772,944**
TOTAL LIABILITIES AND EQUITY	**93,244,729**	**-**		**(1,234,330)**	**92,010,399**
CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME					
31 December 2018					
Cost of revenue	(49,225,782)	953,840	IV, A, C, D, E	(535,177)	(48,807,119)
Gross profit	**16,051,647**	**953,840**		**(535,177)**	**16,470,310**
General and administrative expenses	(4,563,495)	(579,364)	IV	-	(5,142,859)
Selling and marketing expenses	(1,582,781)	(680,478)	IV, A	(106,894)	(2,370,153)
Operating profit	**9,905,371**	**(306,002)**		**(642,071)**	**8,957,298**
Finance income	933,999	76,527	IV	-	1,010,526
Finance costs	(2,082,465)	(38,186)	IV	-	(2,120,651)
Share in net (loss)/profit from associates	(435,530)	-	B.1	115,470	(320,060)
Share in net profit/(loss) from joint ventures	281,631	-	B.2	(855,264)	(573,633)
Other income, net	5,019,859	267,661	IV, B.1, B.2, C, D	1,466,793	6,754,313
Profit before income tax	**13,806,951**	**-**		**84,928**	**13,891,879**
Income tax expenses	(3,133,213)	-	A, D	111,410	(3,021,803)
Profit for the year from continuing operations	**10,673,738**	**-**		**196,338**	**10,870,076**
Profit for the year	**10,630,274**	**-**		**196,338**	**10,826,612**

(Expressed in millions of Rupiah, unless otherwise stated)

49. RESTATEMENT AND RECLASSIFICATION OF FINANCIAL STATEMENTS (continued)

	Previously reported	Reclassification	Notes	Restatement	As restated
CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME					
31 December 2018					
Currency differences from translation of the Group's entity financial statements	1,587,640	-	B.1, B.2	(634,032)	953,608
Share of other comprehensive (loss)/income from PTFI, associates and joint ventures	266,985	-	B.1, B.2	(94,499)	172,486
Other comprehensive (loss)/ income for the year, net of tax	**2,527,510**	**-**		**(728,531)**	**1,798,979**
Total comprehensive (loss)/ income for the year	**13,157,784**	**-**		**(532,193)**	**12,625,591**
31 December 2017					
Cost of revenue	(33,276,439)	445,612	IV, A, C, D, E	(130,055)	(32,960,882)
Gross profit	**13,907,844**	**445,612**		**(130,055)**	**14,223,401**
General and administrative expenses	(3,338,998)	(246,239)	IV	-	(3,585,237)
Selling and marketing expenses	(1,322,579)	(174,610)	IV	-	(1,497,189)
Operating profit	**9,246,267**	**24,763**		**(130,055)**	**9,140,975**
Finance costs	(974,172)	(24,940)	IV	-	(999,112)
Share in net (loss)/profit from associates	(196,773)	-	B.1	62,867	(133,906)
Share in net profit/(loss) from joint ventures	(157,902)	-	B.2	(829,253)	(987,155)
Other income, net	738,759	177	IV, B.1, B.2, C, D	(141,793)	597,143
Profit before income tax	**9,286,039**	**-**		**(1,038,234)**	**8,247,805**
Profit for the year from continuing operations	**6,811,654**	**-**		**(1,038,234)**	**5,773,420**
Profit for the year	**6,805,157**	**-**		**(1,038,234)**	**5,766,923**
Currency differences from translation of the Group's entity financial statements	262,070	-	B.1, B.2	82,149	344,219
Share of other comprehensive (loss)/income from PTFI, associates and joint ventures	(39,172)	-	B.1, B.2	22,886	(16,286)
Other comprehensive (loss)/ income for the year net of tax	**(538,502)**	**-**		**105,035**	**(433,467)**
Total comprehensive (loss)/ income for the year	**6,266,655**	**-**		**(933,199)**	**5,333,456**

(Expressed in millions of Rupiah, unless otherwise stated)

49. RESTATEMENT AND RECLASSIFICATION OF FINANCIAL STATEMENTS (continued)

	Previously reported	Reclassification	Notes	Restatement	As restated
CONSOLIDATED STATEMENT OF CASH FLOWS					
31 December 2018					
CASH FLOWS FROM OPERATING ACTIVITIES					
Receipts from corporate income tax restitution	481,777	(138,930)	V	-	342,847
Receipts from other taxes restitution	-	138,930	V	-	138,930
Payment to suppliers and employees	(54,305,092)	729,558	V	-	(53,575,534)
Payment of corporate income tax	(5,590,187)	1,791,304	V	-	(3,798,883)
Payment of royalties	-	(1,791,304)	V	-	(1,791,304)
Net cash received from operating activities	**6,123,741**	**729,558**		**-**	**6,853,299**
CASH FLOWS FROM INVESTING ACTIVITIES					
Time deposits placement, net	-	(746,284)	V	-	(746,284)
Net cash used in investing activities	**(58,982,802)**	**(746,284)**		**-**	**(59,729,086)**
CASH FLOWS FROM FINANCING ACTIVITIES					
Proceeds from bank borrowings	9,664,298	28,944,732	V	-	38,609,030
Repayment of bank borrowings	(7,314,163)	(28,928,006)	V	-	(36,242,169)
Net cash received from financing activities	**56,450,384**	**16,726**		**-**	**56,467,110**
31 December 2017					
CASH FLOWS FROM OPERATING ACTIVITIES					
Receipts from corporate income tax restitution	860,298	(206,729)	V	-	653,569
Receipts from other taxes restitution	-	206,729	V	-	206,729
Payment to suppliers and employees	(33,998,959)	94,924	V	-	(33,904,035)
Payment of corporate income tax	(3,747,772)	1,658,713	V	-	(2,089,059)
Payment of royalties	-	(1,658,713)	V	-	(1,658,713)
Net cash received from operating activities	**5,750,577**	**94,924**		**-**	**5,845,501**
CASH FLOWS FROM INVESTING ACTIVITIES					
Time deposits placement, net	-	(94,924)	V	-	(94,924)
Net cash used in investing activities	**(4,652,438)**	**(94,924)**		**-**	**(4,747,362)**

49. RESTATEMENT AND RECLASSIFICATION OF FINANCIAL STATEMENTS (continued)

Below are brief explanations of those adjustments that have been reflected in the accompanying restated consolidated financial statements:

A) Under recorded cost of revenue, operating expenses and other expenses

For the year ended 31 December 2018, there were under recorded tin ores compensation cost, tin ores smelting service cost, dredger vessel maintenance services cost, fuel usage and transportation expense amounting to Rp363 billion, Rp92 billion, Rp101 billion, Rp18 billion (2017: Rp29 billion) and Rp107 billion, respectively. The Group has reassessed when these costs should be recognised and concluded that there was an error in determining the point of recognition, and that these costs should be recognised in 2018. With respect to these matters, calculation of inventory costing and the related taxes of each Rp42 billion and Rp113 billion were also improper.

The impact of these errors were as follows:

- As at and for the year ended 31 December 2018, inventories were lower by Rp160 billion, prepaid taxes were higher by Rp97 billion, trade payables were higher by Rp464 billion, accruals were higher by Rp162 billion, taxes payables were higher by Rp21 billion, negative additional paid-in capital was higher by Rp65 billion, non-controlling interests were lower by Rp35 billion, cost of revenue were higher by Rp616 billion, selling and marketing expenses were higher by Rp107 billion and income tax expenses were lower by Rp113 billion.

- As at and for the year ended 31 December 2017, inventories were lower by Rp101 billion, negative additional paid-in capital was higher by Rp47 billion, non-controlling interests were lower by Rp25 billion and cost of revenue were higher by Rp29 billion.

B) Equity accounting of an associate and a joint venture with a foreign functional currency

1) Error related to the accounting of investment in NHM

The Group has an associate, NHM, of which the functional and reporting currency is US Dollars. Meanwhile, the Group's presentation currency is Rupiah. The Group had not previously adjusted its investment in NHM for the effects of translation adjustments arising from the exchange difference in the reporting currencies between the Group and NHM. Previous impairment provision related to the investment in NHM that was recognised in prior years was also determined based on the unadjusted investments.

The Group has determined that the cumulative translation adjustments shoud be recorded as part of the equity accounting of its investment in NHM. The related impairment provision should be calculated based on the adjusted amount of investment. This issue also affected the calculation of the Group's interest in the results of associate. The impacts of these errors are as follows:

- As at and for the year ended 31 December 2018, investment in associates was higher by Rp48 billion, share of profit from investment in associates was higher by Rp116 billion, other expenses was higher by Rp168 billion and other comprehensive income was higher by Rp100 billion.

- As at and for the year ended 31 December 2017, share of profit from investment in associates was higher by Rp63 billion, other expenses was higher by Rp75 billion and other comprehensive income was higher by Rp12 billion.

49. RESTATEMENT AND RECLASSIFICATION OF FINANCIAL STATEMENTS (continued)

B) Equity accounting of an associate and a joint venture with a foreign functional currency (continued)

2) Error related to the accounting of investment in ICA

Prior to December 2018, ICA was the Group's joint venture and had therefore been accounted for using the equity method of accounting. In December 2018, the Group acquired the entire shares of ICA owned by the other venturer and obtained control over ICA (see Note 5). Accordingly, ICA has been consolidated since then.

ICA has been having a foreign functional currency since its establishment in 2007. The Group had not previously adjusted its investment in ICA for the effects of translation adjustments arising from the exchange difference in the functional currencies between the Group and ICA, nor had it absorbed its portion of impairment charges recorded by ICA in 2017 and 2018. The functional currency of ICA had been strengthening against the Group's reporting currency. This had therefore offset the impact of the latter issue on the carrying amount of investment. However, the cumulative translation adjustments and retained earnings were not stated correctly because of those matters.

Furthermore, after acquiring control over ICA in December 2018, the Group would need to recycle the cumulative translation adjustments to the 2018 consolidated statement of profit or loss (see Note 2d). Such did not happen because there was no balance to recycle in the first place. The gain (see Note 5) arising from the acquisition was therefore not correct either.

The impacts of these are mainly as follows:

- As at and for the year ended 31 December 2018, negative additional paid-in capital was higher by Rp946 million, non-controlling interests were lower by Rp510 million, share of loss from investment in joint ventures was higher by Rp855 billion, other income was higher by Rp1,685 billion and other comprehensive income was lower by Rp829 billion.

- As at 31 December 2017, investment in joint ventures was lower by Rp1 billion, negative additional capital was lower by Rp478 billion, non-controlling interests were higher by Rp257 billion, share of loss from investment in joint venture was higher by Rp829 billion and other comprehensive income was higher by Rp93 billion.

C) Capitalisation of certain expenditures

The Group has determined that during the years 2011 to 2015, certain expenditures in FHT and in AJSI were improperly capitalised and carried as construction-in-progress as part of fixed assets on the consolidated statement of financial position. Such expenditures should have been recognised as expenses in the years they were incurred. The impacts of these are mainly as follows:

- As at and for the year ended 31 December 2018, fixed assets were lower by Rp400 billion, negative additional paid-in capital was higher by Rp288 billion, non-controlling interests were lower by Rp155 billion, and cost of revenue and other expenses were lower by Rp21 billion and Rp22 billion, respectively.

- As at and for the year ended 31 December 2017, fixed assets were lower by Rp443 billion, negative additional paid-in capital was higher by Rp267 billion, non-controlling interests were lower by Rp144 billion, and cost of revenue were higher by Rp32 billion.

49. RESTATEMENT AND RECLASSIFICATION OF FINANCIAL STATEMENTS (continued)

D) Estimation of precious metal reserves

As part of the mineral reserves estimation process carried out in 2019, the Group discovered that gold reserves of CSD had not been properly estimated in accordance with the JORC Code in prior years. The gold reserves were overstated. Management has determined the impacts of this matter on the prior years' calculations of depreciation, amortisation and impairment of long-lived assets and recognition of deferred tax assets. The impacts of this error to the prior years's consolidated financial statements are as follows:

- As at and for the year ended 31 December 2018, exploration and evaluation assets, fixed assets, mining properties and deferred tax assets were lower by Rp35 billion, Rp330 billion, Rp87 billion and Rp71 billion, respectively. Negative additional paid-in capital was higher by Rp345 billion, non-controlling interests were lower by Rp186 billion, cost of revenue were lower by Rp83 billion, other expenses and income tax expenses were higher by Rp73 billion and Rp2 billion, respectively.

- As at and for the year ended 31 December 2017, exploration and evaluation assets, fixed assets, mining properties and deferred tax assets were lower by Rp29 billion, Rp334 billion, Rp98 billion and Rp68 billion, respectively. Negative additional paid-in capital was higher by Rp360 billion, non-controlling interests were lower by Rp194 billion, cost of revenue were lower by Rp90 billion and other expenses were higher by Rp67 billion.

E) Estimation of gold content in low grade concentrate

Low grade concentrate is essentially a by-product produced from the refining process of slag material. As part of the preparation process of the Group's consolidated financial statements as at 31 December 2019, management discovered that gold content in low grade concentrate was not appropriately estimated in 2017. Accordingly, management has determined that an adjustment is required in 2017 to write off certain low grade concentrate that resulted from improper estimation of gold content in low grade concentrate. In addition, management has also determined that provision for loss is required in order to measure low grade concentrate at its net realisable value since the Group is currently unable to sell low grade concentrate due to export prohibition imposed by the Government since January 2017.

The impacts of these are mainly as follows:

- As at and for the year ended 31 December 2018, inventories were lower by Rp182 billion, negative additional paid-in capital was higher by Rp103 billion, non-controlling interests were lower by Rp56 billion and cost of revenue were higher by Rp23 billion.

- As at and for the year ended 31 December 2017, inventories were lower by Rp159 billion and cost of revenue were higher by Rp159 billion.

Reclassifications

Certain accounts were reclassified to conform with the 2019 presentation. These reclassifications did not affect the net profit in the years presented. Significant items of reclassifications are described below:

I) Reclassification of mining properties and exploration and evaluation assets

This reclassification pertains to exploration and evaluation assets amounting to Rp71.5 billion which was mistakenly presented as mining properties in the prior period consolidated statement of financial position.

49. RESTATEMENT AND RECLASSIFICATION OF FINANCIAL STATEMENTS (continued)

Reclassifications (continued)

II) Reclassification of prepaid taxes and taxes payable accounts

This reclassification pertains to corporate income taxes in prepaid taxes and taxes payables that were reclassified to other taxes to conform to the 2019 presentation. On the other hand, certain prepaid taxes of the Group which are in the refund and/or dispute process with the tax office have been reclassified from current assets to non-current assets. The Group expects that it would take more than one year to receive the cash from the tax refund and/or resolution of the tax disputes.

III) Reclassification of other comprehensive income in equity

This reclassification pertains to other comprehensive income account in equity amounting to Rp6.1 billion which was mistakenly presented as part of unappropriated retained earnings in the prior period consolidated statement of financial position.

IV) Reclassification of certain accounts from cost of revenue to operating expenses

In 2019, the Group undertook a review of the classification and allocation of cost of revenue and operating expenses based on the cost centers of each business unit within the Group. Based on this review, certain cost of revenue and operating expenses accounts have been reclassified to more properly reflect their nature. The related comparative figures in the consolidated statement of profit or loss of the Group for the year ended 31 December 2018 and 2017 have been reclassified to conform to the 2019 presentation.

V) Reclassification for certain items in the consolidated statement of cash flows

Certain items in the consolidated statement of cash flows for the year ended 31 December 2018 and 2017 to conform presentation of the 2019 presentation have been reclassified to reflect nature of the cash flows such as placement of time deposit for the purpose of investing, reclassification within cash flows from operating activities and reclassification of repayment of bank borrowings from proceeds from bank borrowings within cash flows from financing activities.

PT FREEPORT INDONESIA

Financial statements
as of December 31, 2019, 2018, and 2017 and for the years then ended
with independent auditors' report
(amounts in United States dollars)

PT FREEPORT INDONESIA AND SUBSIDIARIES
CONSOLIDATED FINANCIAL STATEMENTS
AS OF DECEMBER 31, 2019, 2018 AND 2017 AND FOR THE YEARS THEN ENDED
WITH INDEPENDENT AUDITORS' REPORT

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Independent Auditors' Report

Report No. 00347/2.1032/AU.1/02/0694-2/1/IV/2020

The Shareholders and the Boards of Commissioners and Directors
PT Freeport Indonesia

We have audited the accompanying consolidated financial statements of PT Freeport Indonesia (the "Company") and its subsidiaries, which comprise the consolidated statements of financial position as of December 31, 2019, 2018, and 2017, and the consolidated statements of profit or loss and other comprehensive income, changes in equity, and cash flows for the years then ended, and a summary of significant accounting policies and other explanatory information.

Management's responsibility for the financial statements

Management is responsible for the preparation and fair presentation of such consolidated financial statements in accordance with Indonesian Financial Accounting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' responsibility

Our responsibility is to express an opinion on such consolidated financial statements based on our audits. We conducted our audits in accordance with Standards on Auditing established by the Indonesian Institute of Certified Public Accountants. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether such consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Purwantono, Sungkoro & Surja
Registered Public Accountants KMK No. 603/KM.1/2015
A member firm of Ernst & Young Global Limited

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Independent Auditors' Report (continued)

Report No. 00347/2.1032/AU.1/02/0694-2/1/IV/2020 (continued)

Opinion

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of PT Freeport Indonesia and its subsidiaries as of December 31, 2019, 2018, and 2017, and their consolidated financial performance and cash flows for the years then ended, in accordance with Indonesian Financial Accounting Standards.

Other matter

This report is prepared solely for inclusion in the offering document in connection with the proposed offering of the debt securities of PT Indonesia Asahan Aluminium (Persero) (a shareholder of the Company) in the United States of America and outside of the United States of America in reliance on Rule 144A and Regulation S, respectively, under the United States Securities Act of 1933, and is not intended to be and should not be used for any other purposes.

KAP Purwantono, Sungkoro & Surja

Feniwati Chendana, CPA
Public Accountant Registration No. AP.0694

April 2, 2020

PT FREEPORT INDONESIA AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION
AS OF DECEMBER 31, 2019, 2018 AND 2017
(Expressed in thousand United States dollars)

		As of December 31,		
	Notes	2019	2018	2017
		US$	US$	US$
ASSETS				
Current assets:				
Cash and cash equivalents	2d,3	6,221	11,440	104,473
Restricted cash	2d,2m,17,19	99,502	108,317	51,496
Trade receivables				
Third parties	2r,4,20	7,440	128,025	387,834
Related parties	2j,4,5	260,515	175,970	307,815
Other receivables				
Third parties	4	176,754	23,908	16,596
Related parties	2j,4,5	1,668	17,364	46,072
Inventories, net of allowance for obsolescence of US$23,488 as of December 31, 2019, US$22,716 as of December 31, 2018, and US$26,732 as of December 31, 2017	2e,6	662,999	904,300	758,015
Prepaid taxes	2q,15a	255,479	139,567	178,690
Prepaid expenses and other		10,822	19,674	22,792
Total current assets		1,481,400	1,528,565	1,873,783
Non-current assets:				
Investment in PT Smelting - associated company	2b,7	79,502	124,647	61,121
Property, plant and equipment, net of accumulated depreciation of US$5,069,739 as of December 31, 2019, US$4,853,218 as of December 31, 2018, and US$4,384,281 as of December 31, 2017	2f,2k,8	10,237,333	9,218,955	6,003,144
Exploration and evaluation assets	2g,9	—	—	97,682
Mine properties, net of accumulated amortization of US$592,654 as of December 31, 2019, US$1,041,496 as of December 31, 2018, and US$998,318 as of December 31, 2017	2g,9	3,644,495	3,590,794	1,877,571
Deferred stripping costs, net	2h	—	5,092	59,641
Long-term notes and accounts receivable				
Third parties	10,15e	321,247	558,347	529,549
Related parties	2j,5,10	4,237	4,538	4,827
Long-term inventory	2e,6	—	—	20,941
Other assets	19	164,504	134,096	133,418
Total non-current assets		14,451,318	13,636,469	8,787,894
Total assets		15,932,718	15,165,034	10,661,677

The accompanying notes form an integral part of these consolidated financial statements.

PT FREEPORT INDONESIA AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF FINANCIAL POSITION (continued)
AS OF DECEMBER 31, 2019, 2018 and 2017
(Expressed in thousand United States dollars)

		As of December 31,		
	Notes	**2019**	**2018**	**2017**
		US$	**US$**	**US$**
LIABILITIES AND EQUITY				
Current liabilities:				
Trade payables				
Third parties	2r,11,20	272,302	302,568	214,023
Related parties	2j,5,11	4,829	4,225	6,669
Accrued liabilities				
Third parties	12	415,081	335,317	176,681
Related parties	2j,5,12	92,748	102,166	96,691
Taxes payable	2q,15b	18,597	167,587	421,230
Unearned customer receipts - third parties	13	2,411	3,085	78,125
Royalties payable	2n	67	28,716	66,246
Current portion of asset retirement obligations	2l,17	227,250	196,399	123,182
Total current liabilities		1,033,285	1,140,063	1,182,847
Non-current liabilities:				
Deferred income taxes	2q,15d	2,308,371	2,372,655	1,834,985
Long-term debt	2j,2r,5,14,24	972,500	76,000	—
Asset retirement obligations	2l,17	1,038,923	1,043,468	1,169,298
Provision for employee benefits	2o,16	19,653	18,504	20,541
Other non-current liabilities	15e,18,19	232,974	154,837	148,348
Total non-current liabilities		4,572,421	3,665,464	3,173,172
Total liabilities		5,605,706	4,805,527	4,356,019
Equity:				
Share capital, US$100 par value (full amount) for all years; 379,150 shares (2017: 300,000) (full amount) authorized; 379,150 shares (2017: 227,490 shares) (full amount) issued and fully paid	21	37,915	37,915	22,749
Additional paid-in capital	2p,5,21	3,970,488	3,803,272	317,496
Retained earnings		6,346,591	6,554,565	6,011,159
Remeasurement losses on defined benefit plans	2o,16	(27,982)	(36,245)	(45,746)
Net equity		10,327,012	10,359,507	6,305,658
Total liabilities and equity		15,932,718	15,165,034	10,661,677

The accompanying notes form an integral part of these consolidated financial statements.

PT FREEPORT INDONESIA AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2019, 2018 AND 2017
(Expressed in thousand United States dollars)

		Years Ended December 31,		
	Notes	2019	2018	2017
		US$	US$	US$
Net revenues	2j,2n,5,20,22	2,771,213	5,558,507	4,445,043
Cost of sales	2j,5,23	2,448,415	2,504,591	2,349,713
Gross profit		322,798	3,053,916	2,095,330
Expenses:				
General and administrative expenses	2j,5,23	120,848	121,145	123,641
Selling and marketing expenses	2j,5,23	2,230	2,231	2,142
Exploration impairment	2g,9	—	98,202	—
Operating profit		199,720	2,832,338	1,969,547
Interest expense	15e	(82,283)	(1,231)	(5,243)
Interest income	2r	7,414	38,869	5,678
Other expense, net	23	(142,102)	(7,805)	(159)
Equity in associated company’s net earnings	2b,7	12,263	7,047	9,720
(Loss) profit before income tax expense		(4,988)	2,869,218	1,979,543
Income tax expense	2q,15c	(202,986)	(400,109)	(696,690)
Net (loss) profit before net profit tax		(207,974)	2,469,109	1,282,853
Non-tax state revenue (4%)	1a	—	—	—
Regional governments revenue (6%)	1a	—	—	—
Net (loss) profit		(207,974)	2,469,109	1,282,853
Other comprehensive income:				
Other comprehensive income not to be reclassified to profit or loss in subsequent periods				
Remeasurement gains on pension plans	2o,16	12,927	10,027	11,967
Tax recognized	2q	(3,191)	(3,394)	(4,190)
Foreign exchange impact	2c	(1,473)	2,868	436
Net other comprehensive income not to be reclassified to profit or loss in subsequent periods		8,263	9,501	8,213
Total comprehensive (loss) income attributable to stockholders		(199,711)	2,478,610	1,291,066
Basic (loss) earnings per share attributable to stockholders (full amount)	2s	(548.53)	10,641.66	5,639.16
Average shares outstanding (full amount)		379,150	232,023	227,490
Dividends declared and paid per share of common stock (full amount)	21	—	8,465.00	6,340.00

The accompanying notes form an integral part of these consolidated financial statements.

PT FREEPORT INDONESIA AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2019, 2018 AND 2017
(Expressed in thousand United States dollars)

	Notes	Issued and Fully Paid Share Capital	Additional Paid-In Capital	Retained Earnings	Remeasurement losses on pension plans	Net Equity
		US$	US$	US$	US$	US$
Balance at December 31, 2016		**22,749**	**316,373**	**6,170,593**	**(53,959)**	**6,455,756**
Net profit		—	—	1,282,853	—	1,282,853
Dividends declared and paid	21	—	—	(1,442,287)	—	(1,442,287)
Remeasurement gains on pension plans	2o,16	—	—	—	11,967	11,967
Tax recognized	2q	—	—	—	(4,190)	(4,190)
Foreign exchange impact		—	—	—	436	436
Distributions for exercised/vested parent company (FCX) equity awards to employees	2j,2p,5	—	(1,874)	—	—	(1,874)
Amortization of parent company (FCX) equity awards to employees	2j,2p,5	—	2,997	—	—	2,997
Balance at December 31, 2017		**22,749**	**317,496**	**6,011,159**	**(45,746)**	**6,305,658**
Net profit		—	—	2,469,109	—	2,469,109
Dividends declared and paid	21	—	—	(1,925,703)	—	(1,925,703)
Remeasurement gains on pension plans	2o,16	—	—	—	10,027	10,027
Tax recognized	2q	—	—	—	(3,394)	(3,394)
Foreign exchange impact		—	—	—	2,868	2,868
Share capital issued	21	15,166	3,484,834	—	—	3,500,000
Distributions for exercised/vested parent company (FCX) equity awards to employees	2j,2p,5	—	(3,650)	—	—	(3,650)
Amortization of parent company (FCX) equity awards to employees	2j,2p,5	—	4,592	—	—	4,592
Balance at December 31, 2018		**37,915**	**3,803,272**	**6,554,565**	**(36,245)**	**10,359,507**
Net loss		—	—	(207,974)	—	(207,974)
Remeasurement gains on pension plans	2o,16	—	—	—	12,927	12,927
Tax recognized	2q	—	—	—	(3,191)	(3,191)
Foreign exchange impact		—	—	—	(1,473)	(1,473)
Capital contributions from PT Indonesia Asahan Aluminium (Persero)		—	164,914	—	—	164,914
Distributions for exercised/vested parent company (FCX) equity awards to employees	2j,2p,5	—	(1,736)	—	—	(1,736)
Amortization of parent company (FCX) equity awards to employees	2j,2p,5	—	4,038	—	—	4,038
Balance at December 31, 2019		**37,915**	**3,970,488**	**6,346,591**	**(27,982)**	**10,327,012**

The accompanying notes form an integral part of these consolidated financial statements.

PT FREEPORT INDONESIA AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2019, 2018 AND 2017
(Expressed in thousand United States dollars)

	Notes	Years Ended December 31, 2019	2018	2017
		US$	US$	US$
Cash flow from operating activities:				
Net (loss) profit		(207,974)	2,469,109	1,282,853
Adjustments to reconcile net (loss) profit to net cash provided by operating activities:				
Depreciation and amortization	23	388,511	604,271	615,566
Amortization of deferred stripping costs	23	5,092	54,549	70,834
Deferred income taxes	15c	(70,369)	9,741	122,220
Charges for surface water tax settlement	19	27,682	69,401	—
Payments for surface water tax settlement	19	(50,714)	—	—
Tax reserves and United States tax reform		40,567	(39,811)	(2,085)
Write-off of certain previously capitalized exploration costs	9	—	98,202	—
Write-off of certain previously capitalized project costs for new smelter in Indonesia	8,23	—	62,349	—
Provision for prior years' employee withholding taxes	12,19,2	—	61,499	—
Payments for prior years' employee withholding taxes		(15,721)	—	—
Charges for prior period permit fees	17,23	—	31,924	—
Net charges for asset retirement obligations, including accretion		25,535	4,207	14,574
Payments for asset retirement obligations	17	(91,955)	(75,626)	(39,877)
Elimination (recognition) of profit on sales to PT Smelting	7	17,310	(56,479)	28,713
Change in long-term stockpiles		—	20,941	109,369
Change in statutory tax rate	15c	—	(532,943)	—
Other		11,234	33,196	(59,011)
Changes in working capital and other:				
Accounts receivable		(71,571)	437,880	(151,286)
Inventories		173,205	(157,070)	(101,187)
Prepaid taxes		(112,592)	82,887	142,700
Prepaid expenses and other		8,852	3,224	(8,981)
Accounts payable, accrued liabilities and royalties payable		56,890	(72,320)	20,449
Accrued income taxes and timing of other tax payments		81,416	(258,299)	376,772
Net cash provided by operating activities		215,398	2,850,832	2,421,623
Cash flow from investing activities:				
Capital expenditures	8,9	(1,273,200)	(918,891)	(767,613)
Acquisition of PT Rio Tinto Indonesia	1b	—	(3,500,000)	—
Cash outflow for restricted cash	19	(46,710)	(179,691)	(40,704)
Dividends received from PT Smelting	7	40,098	—	2,692
Proceeds from sales of assets and other		2,874	9,763	36,685
Net cash used in investing activities		(1,276,938)	(4,588,819)	(768,940)
Cash flow from financing activities:				
Net proceeds (repayment) of parent company (FCX) loan	14,25	896,500	76,000	(88,000)
Repayment of finance lease obligation		—	—	(22,903)
Common dividends paid	21	—	(1,925,703)	(1,442,287)
Proceeds from share capital issued	21	—	3,500,000	—
Capital contribution from PT Indonesia Asahan Aluminium (Persero)		164,914	—	—
Distributions for exercised/vested parent company (FCX) equity awards to employees		(1,736)	(3,650)	(1,874)
Financing costs and other		(3,357)	(1,693)	—
Net cash provided by (used in) financing activities		1,056,321	1,644,954	(1,555,064)
Net (decrease) increase in cash and cash equivalents		(5,219)	(93,033)	97,619
Cash and cash equivalents at beginning of year		11,440	104,473	6,854
Cash and cash equivalents at end of year	3	6,221	11,440	104,473

The accompanying notes form an integral part of these consolidated financial statements.

1. GENERAL

a. Establishment and General Information

Freeport Indonesia Incorporated, a United States of America (US) company, entered into a contract of work with the Government of the Republic of Indonesia (GOI) in 1967. Commercial production began in 1972. On December 26, 1991, PT Freeport Indonesia Company became the corporate successor to Freeport Indonesia Incorporated. PT Freeport Indonesia Company was established as a limited liability company organized under the laws of the Republic of Indonesia based on notarial deed No. 102 of R. Arie Soetardjo, S.H., and was also domesticated in Delaware, US, until July 15, 2015. The deed of establishment was approved by the Ministry of Justice in decision letter No. C2.8171.HT.01.01.TH.91 dated December 27, 1991, and was published in the State Gazette No. 105 dated December 31, 1991, Supplement No. 5121. On April 26, 2000, the Ministry of Justice in decision letter No. C-9305 HT.01.04-TH.2000 approved, among other matters, the change of the company's name to PT Freeport Indonesia (the Company). The latest amended and restated Articles of Association of the Company to comply with Law No. 40 Year 2007 concerning "Limited Liability Companies" were approved by the Ministry of Law and Human Rights in decision letter No. AHU-0032023.AH.01.02.Tahun 2018 dated December 21, 2018.

In accordance with article 3 of the Company's Articles of Association, the Company is engaged in the exploration for and mining and processing of ore containing copper, gold and silver in Indonesia and in the marketing of concentrate containing such metals.

The Company's principal office is located at Plaza 89, 5th Floor, JL. HR. Rasuna Said Kav. X-7 No. 6, Jakarta, Indonesia, with its primary operations office at Office Building I, JL. Mandala Raya Selatan No. 1, Kuala Kencana, Timika, Indonesia.

Special Mining License (IUPK)

As discussed in Note 1b, on December 21, 2018, Freeport-McMoRan Inc. (FCX), the Company's former majority shareholder, completed the transaction with the GOI regarding the Company's long-term mining rights and share ownership. Concurrent with the closing of the transaction, the GOI granted the Company an IUPK to replace its former Contract of Work (COW), enabling the Company to conduct operations in the Grasberg minerals district in Papua, Indonesia, through 2041. Under the terms of the IUPK, the Company has been granted an extension of mining rights through 2031, with rights to extend mining rights through 2041, subject to the Company completing the construction of a new smelter in Indonesia within five years of closing the transaction and fulfilling its defined fiscal obligations to the GOI. The IUPK, and related documentation, contains legal and fiscal terms and is legally enforceable through 2041. In addition, FCX, as a foreign investor, has rights to resolve investment disputes with the GOI through international arbitration.

The key fiscal terms set forth in the IUPK include a 25 percent corporate income tax rate, a 4 percent non-tax state revenue obligation calculated on net profits, a 6 percent regional governments revenue obligation calculated on net profits, and royalty rates of 4 percent for copper, 3.75 percent for gold and 3.25 percent for silver. The Company did not record any charges for the 4 percent non-tax state revenue obligation or 6 percent regional governments revenue obligation for any years presented because the obligations were first effective for 2019 and the Company did not report net profits in 2019. The Company's royalties totaled US$106.5 million in 2019, US$237.7 million in 2018 and US$172.9 million in 2017.

1. GENERAL (continued)

a. Establishment and General Information (continued)

The IUPK also requires the Company to pay export duties of 5 percent, declining to 2.5 percent when smelter development progress exceeds 30 percent and eliminated when smelter progress exceeds 50 percent. The Company had previously agreed to and has been paying export duties since July 2014 (see Note 19 for further discussion of disputed export duties for the period April 2017 to December 21, 2018). The Company's export duties charged against revenues totaled US$221.1 million (which includes US$154.9 million associated with an unfavorable Indonesia Supreme court ruling related to certain disputed export duties) in 2019, US$180.2 million in 2018 and US$115.2 million in 2017.

The IUPK also requires the Company to pay surface water taxes of US$15.0 million annually, beginning in 2019, which are recognized in production and delivery costs as incurred.

On September 12, 2019, the Company received approval from the Indonesia government to increase its export quota from approximately 180,000 dry metric tons (DMT) of concentrate to approximately 680,000 DMT for the current export period, which expires on March 8, 2020. In March 2020, the Company received a one-year extension of its export license through March 15, 2021.

Former Contract of Work

The Company was entitled to mine under the former COW through December 21, 2018. The Company's original COW was entered into in 1967 by the Company's predecessor (Freeport Indonesia Incorporated) and was replaced by the former COW in 1991.

Pursuant to the former COW, the Company was allowed to conduct exploration, mining and production activities in the Grasberg minerals district (formerly Block A).

Former Joint Venture with Rio Tinto

On December 21, 2018, the Company acquired Rio Tinto plc's (Rio Tinto) interest in the joint venture between the Company and Rio Tinto and is consolidating 100 percent of the Indonesia operations (Note 1b). Pursuant to Rio Tinto's previous joint venture agreement with the Company, Rio Tinto had a 40 percent interest in certain assets and future production exceeding specified annual amounts of copper, gold and silver through 2022 in Block A of the Company's former COW, and, after 2022, a 40 percent interest in all production from Block A.

Mineral Reserves (unaudited)

Proven and probable reserves were determined by the use of mapping, drilling, sampling, assaying and evaluation methods generally applied in the mining industry. The term "reserve," as used in the reserve data presented here, means that part of a mineral deposit that can be economically and legally extracted or produced at the time of the reserve determination. The term "proven reserves" means reserves for which (a) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes; (b) grade and/or quality are computed from the results of detailed sampling; and (c) the sites for inspection, sampling and measurements are spaced so closely and the geologic character is sufficiently defined that size, shape, depth and mineral content of reserves are well established. The term "probable reserves" means reserves for which quantity and grade are computed from information similar to that used for proven reserves but the sites for sampling are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for proven reserves, is high enough to assume continuity between points of observation.

1. GENERAL (continued)

a. Establishment and General Information(continued)

Mineral Reserves (unaudited) (continued)

All of the Company's current proven and probable reserves, shown below, are located in the operations area of the Company's IUPK. The Company's reserve amounts reflect estimates of minerals that can be recovered through the end of 2041, and the Company's current mine plan and planned operations are based on the assumption that the Company will extend its mining rights through 2041. As a result, the Company will not mine all of these ore reserves during the initial extension of the IUPK. Prior to the end of 2031, under its current mine plan, the Company expects to mine approximately 52 percent of aggregate proven and probable ore at December 31, 2019, representing approximately 56 percent of recoverable copper reserves and approximately 62 percent of recoverable gold reserves.

Estimated recoverable reserves at December 31, 2019, were determined using metals price assumptions of US$2.50 per pound for copper, US$1,200 per ounce for gold and US$15.00 per ounce for silver. For the three-year period ended December 31, 2019, the London Metal Exchange (LME) copper settlement prices averaged US$2.83 per pound, the London Bullion Market Association (LBMA) gold prices averaged US$1,306 per ounce and LME silver settlement prices averaged US$16.32 per ounce. The recoverable proven and probable reserves in the following table represent the estimated metal quantities from which the Company expects to be paid after application of estimated metallurgical recovery rates and smelter recovery rates, where applicable. Recoverable reserves are that part of a mineral deposit that the Company estimates can be economically and legally extracted or produced at the time of the reserve determination.

	Recoverable Proven and Probable Reserves		
Ore Body Estimates as of December 31, 2019	**Copper (billion pounds)**	**Gold (million ounces)**	**Silver (million ounces)**
Developed and producing mines:			
Deep Ore Zone	0.3	0.4	1.5
Big Gossan	2.6	1.2	15.8
Under development:			
Deep Mill Level Cave	7.6	8.2	39.1
Grasberg Block Cave	17.2	14.2	62.8
Undeveloped:			
Kucing Liar	7.9	5.1	29.0
Total	35.6	29.1	148.2

The following table summarizes the changes in the Company's estimated recoverable reserves during 2019:

	Recoverable Proven and Probable Reserves		
Ore Body Estimates as of December 31, 2019	**Copper (billion pounds)**	**Gold (million ounces)**	**Silver (million ounces)**
Beginning of year	36.2	30.2	148.6
Revisions	—	(0.2)	1.9
Production	(0.6)	(0.9)	(2.3)
End of year	35.6	29.1	148.2

1. GENERAL (continued)

a. Establishment and General Information (continued)

Production, Sales and Average Realized Prices, Net of Rio Tinto's Interest (unaudited)[a]

	Years Ended December 31,		
	2019	2018	2017
Copper (thousands of recoverable pounds)			
Production:			
Grasberg open pit	304,179	975,070	838,655
Deep Ore Zone	85,230	108,455	102,511
Big Gossan	68,485	43,397	7,634
Deep Mill Level Zone[b]	96,641	15,666	15,868
Grasberg Block Cave[b]	52,823	17,424	19,226
Total production	607,358	1,160,012	983,894
Sales	666,617	1,130,392	980,799
Average realized price per pound	US$2.72	US$2.89	US$3.00
Gold (recoverable ounces)			
Production:			
Grasberg open pit	532,441	2,218,072	1,355,523
Deep Ore Zone	102,757	139,072	151,063
Big Gossan	38,030	21,921	4,810
Deep Mill Level Zone[b]	139,330	21,643	22,952
Grasberg Block Cave[b]	50,739	15,467	19,468
Total production	863,297	2,416,175	1,553,816
Sales	972,834	2,365,775	1,539,743
Average realized price per ounce	US$1415.66	US$1,254.12	US$1,267.77
Silver (recoverable ounces)			
Production:			
Grasberg open pit	723,938	2,629,148	2,144,819
Deep Ore Zone	494,731	643,879	574,413
Big Gossan	458,567	357,072	85,867
Deep Mill Level Zone[b]	454,192	124,182	68,841
Grasberg Block Cave[b]	121,811	90,715	107,146
Total production	2,253,239	3,844,996	2,981,086
Sales	2,454,721	3,762,431	2,964,021
Average realized price per ounce	US$16.15	US$15.24	US$16.56

a. Prior to December 21, 2018, the Company had an unincorporated joint venture with Rio Tinto.

b. The material processed is from the pre-commercial production that represents ore extracted during the development phase for the purpose of obtaining access to the ore body.

1. GENERAL (continued)

a. Establishment and General Information (continued)

100 Percent Production and Sales, Including Rio Tinto's Interest (unaudited)[a]

	Years Ended December 31,		
	2019	**2018**	**2017**
Copper (thousands of recoverable pounds)			
Production:			
Grasberg open pit	304,179	1,031,537	849,025
Deep Ore Zone	85,230	114,735	103,779
Big Gossan	68,485	45,911	7,729
Deep Mill Level Zone[b]	96,641	16,573	16,065
Grasberg Block Cave[b]	52,823	18,433	19,463
Total production	607,358	1,227,189	996,061
Sales	666,617	1,190,946	992,661
Gold (recoverable ounces)			
Production:			
Grasberg open pit	532,441	2,476,104	1,355,523
Deep Ore Zone	102,757	155,250	151,063
Big Gossan	38,030	24,471	4,810
Deep Mill Level Zone[b]	139,330	24,161	22,952
Grasberg Block Cave[b]	50,739	17,267	19,468
Total production	863,297	2,697,253	1,553,816
Sales	972,834	2,629,182	1,539,743
Silver (recoverable ounces)			
Production:			
Grasberg open pit	723,938	2,840,462	2,144,819
Deep Ore Zone	494,731	695,630	574,413
Big Gossan	458,567	385,771	85,867
Deep Mill Level Zone[b]	454,192	134,163	68,841
Grasberg Block Cave[b]	121,811	98,006	107,416
Total production	2,253,239	4,154,032	2,981,356
Sales	2,454,721	4,022,529	2,964,021

a. Prior to December 21, 2018, the Company had an unincorporated joint venture with Rio Tinto.

b. The material processed is from the pre-commercial production that represents ore extracted during the development phase for the purpose of obtaining access to the ore body.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

1. GENERAL (continued)

b. Subsidiaries and Associates

The Company has direct or indirect ownership interests of more than 50 percent in the following subsidiaries, which are included in the consolidated financial statements:

Subsidiaries	Domicile	Percentage of Ownership[a]	Start of Commercial Operations
PT Rio Tinto Indonesia	Indonesia	100.00000%	1996
PT Kencana Infra Nusakarya	Indonesia	100.00000%	1993
PT Kencana Wisata Nusakarya	Indonesia	99.99999%	1994
PT Freeport Management Indonesia	Indonesia	99.99914%	1992
PT Mitradaya Vulkanisindo	Indonesia	100.00000%	2000
PT Manyar Maju Refinery[b]	Indonesia	99.99000%	-

a. Ownership interests are as of December 31, 2019, 2018 and 2017, except for PT Rio Tinto Indonesia that was acquired on December 21, 2018.
b. PT Manyar Maju Refinery (PT MMR) was established on November 7, 2019. In accordance with its Articles of Association, PT MMR is engaged in the processing of precious metals.

PT Rio Tinto Indonesia

On December 21, 2018, the Company completed the transaction with the GOI regarding its long-term mining rights and share ownership.

Pursuant to the divestment agreement and related documents announced on September 28, 2018, PT Indonesia Asahan Aluminium (Persero) (PT Inalum), an Indonesia state-owned enterprise, acquired for cash consideration of US$3.85 billion all of Rio Tinto's interests associated with the joint venture with the Company (the former Rio Tinto Joint Venture) and 100 percent of FCX's interests in PT Indonesia Papua Metal Dan Mineral (PTI - formerly known as PT Indocopper Investama), which at the time owned 9.36 percent of the Company. Of the US$3.85 billion in cash consideration, Rio Tinto received US$3.5 billion, and FCX received US$350 million.

In connection with the transaction, an aggregate 40 percent share ownership in the Company was issued to PT Inalum and PTI (which is expected to be owned by PT Inalum and the provincial/regional government in Papua). Based on a subscription of PT Inalum's rights to acquire for cash consideration of US$3.5 billion all of Rio Tinto's interests in the former Rio Tinto Joint Venture, the Company acquired all of the common stock of the entity (PTRTI) that held Rio Tinto's interest. After the transaction, PT Inalum's (26.24 percent) and PTI's (25.00 percent) collective share ownership of the Company totals 51.24 percent and FCX's share ownership totals 48.76 percent. The arrangements provide for FCX and the other pre-transaction shareholders (*i.e.*, PT Inalum and PTI) to retain the economics of the revenue and cost sharing arrangements under the former Rio Tinto Joint Venture.

FCX, the Company, PTI and PT Inalum entered into a shareholders agreement, which includes provisions related to the governance and management of the Company. The Company analyzed its acquisition of the former Rio Tinto Joint Venture interests and concluded the transaction should be accounted for as an asset acquisition as substantially all of the fair value of the gross assets acquired is concentrated in mineral reserves and related long-lived mining assets, and PTRTI does not qualify as a business under the applicable accounting guidance. The Company allocated the US$3.5 billion purchase price to the assets acquired and liabilities assumed based on their estimated fair values on the acquisition date. The fair value estimates were based on, but not limited to, long-term metal price assumptions of US$3.00 per pound of copper and US$1,300 per ounce of gold; expected future cash flows based on estimated reserve quantities; costs to produce and develop the related reserves; current replacement cost for similar capacity for certain fixed assets; and appropriate discount rates using an estimated international cost of capital of 14 percent. The estimates were primarily based on significant inputs not observable in the market (as discussed above) and thus represent Level 3 measurements.

1. GENERAL (continued)

b. Subsidiaries and Associates (continued)

The following table summarizes the allocation of the purchase price (in millions):

Current assets	25
Property, plant, equipment and mine development costs:	
Mineral reserves	3,056
Mine development, infrastructure and other	1,559
Liabilities other than taxes	(77)
Deferred income taxes, net	(1,063) [a]
Total purchase price	3,500

a. Deferred income taxes have been recognized on the fair value adjustments to net assets using an Indonesia corporate income tax rate of 25 percent.

Other subsidiaries

PT Kencana Infra Nusakarya leases all of its assets to the Company. The leased assets, all of which are located in the area near the Company's operations, are directly used by the Company's employees and contractors working in its mining and related operations, and include residential apartments, recreation and office buildings, shopping centers, service centers, transportation facility buildings and health facilities. PT Kencana Wisata Nusakarya (KWN) owns a hotel and recreational facility located in the area near the Company's operations, and the Company compensates KWN for providing services associated with the operation of these facilities. PT Freeport Management Indonesia provides management consultation services to the Company (formerly invested in venture capital enterprises in the area near the Company's operations). PT Mitradaya Vulkanisindo provides purchasing and logistics services, event organizing services and property management development services as requested by the Company.

Total assets of the Company's subsidiaries before eliminations are as follows:

	December 31,		
	2019	2018	2017
PT Rio Tinto Indonesia	1,704,110	1,614,407	—
PT Kencana Infra Nusakarya	133,744	133,435	132,995
PT Kencana Wisata Nusakarya	25,777	26,058	26,204
PT Freeport Management Indonesia	915	888	892
PT Mitradaya Vulkanisindo	193	193	194

Associates

Information on the Company's associates (in which the Company has direct or indirect ownership interest of less than 50 percent) is as follows:

Associates	Domicile and Year Commercial Operations Started	Business Activities	Percentage of Ownership
PT Smelting	Indonesia, 1999	Copper smelting and	25.0%
PT Airfast Aviation Facilities Company (AVCO)	Indonesia, 1995	Operator of Timika airport	25.0%

See Note **7** for a discussion of PT Smelting and AVCO.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

1. GENERAL (continued)

c. Boards of Commissioners and Directors, and Employees

The members of the Company's Boards of Commissioners and Directors, who were appointed at the Company's General Meeting of Shareholders for each of the periods shown below, were as follows:

	2019	2018	2017
Commissioners			
Richard Carl Adkerson, President	✓	✓	✓
Amien Sunaryadi, Vice President[a]	-	✓	-
Budi Gunadi, Sadikin[b]	-	✓	-
Hinsa Siburian[c]	✓	✓	-
Kathleen Lynne Quirk[d]	✓	✓	-
Adrianto Machribie Reksohadiprodjo[c]	✓	✓	-
Craig James Kinnel[e]	-	-	✓
Andi Mattalatta[f]	-	-	✓
Dean Thomas Falgoust[f]	-	-	✓
Gabrielle Kirk McDonald[f]	-	-	✓
James Taylor Wharton[f]	-	-	✓
John Gerard Amato[f]	-	-	✓
Marzuki Darusman[f]	-	-	✓
Michael Joseph Arnold[f]	-	-	✓
Nabiel Makarim[f]	-	-	✓
Thom Beanal[f]	-	-	✓
Titus Octovianus Potereyauw[f]	-	-	✓
William Russell King[f]	-	-	✓
Directors			
Clayton Allen Wenas, President[g]	✓	✓	✓
Orias Petrus Moedak, Vice President[h]	-	✓	-
Achmad Ardianto	✓	✓	✓
Jenpino Ngabdi[i]	✓	✓	-
Robert Charles Schroeder	✓	✓	✓
Mark Jerome Johnson[j]	✓	✓	-
Zulkifli Lambali[k]	-	-	-
Brian David Clark[l]	-	-	✓
Brian Lloyd Esser[l]	-	-	✓
Clementino Enrico Navito Lamury[l]	-	-	✓
Kathleen Lynne Quirk[d]	-	-	✓
Sonny Eko Sulaksono Prasetyo[m]	-	-	✓

a. Appointed as Vice President Commissioner effective December 21, 2018, and resigned as Vice President Commissioner effective December 23, 2019.
b. Appointed as Commissioner effective December 21, 2018, and resigned as Commissioner effective October 25, 2019.
c. Appointed as Commissioner effective December 21, 2018.
d. Appointed as Commissioner effective December 21, 2018, and resigned as Director effective December 21, 2018.
e. Resigned as Commissioner effective July 2, 2018.
f. Resigned as Commissioner effective December 21, 2018.
g. Appointed as President Director effective December 21, 2018.
h. Appointed as Vice President Director effective December 21, 2018, resigned as Vice President Director effective November 25, 2019, and appointed as Vice President Commissioner effective February 7, 2020.
i. Appointed as Director effective December 21, 2018, and appointed as Vice President Director effective February 7, 2020.
j. Appointed as Director effective December 21, 2018.
k. Appointed as Director effective May 18, 2018, and resigned as Director effective December 21, 2018.
l. Resigned as Director effective December 21, 2018.
m. Resigned as Director effective April 11, 2018.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

1. GENERAL (continued)

c. Boards of Commissioners and Directors, and Employees (continued)

The Company pays fees and other benefits to support the operational duties of the Board of Commissioners. The total for commissioner fees were US$400 thousand in 2019, and US$450 thousand in each of 2018 and 2017. In addition, the Company had US$4 thousand for other allowances in 2017.

The Company provides compensation and other benefits to support the operational duties of the Board of Directors. The total direct costs of such benefits are as follows:

	Years Ended December 31,		
	2019	2018	2017
Salaries and benefits	1,598	3,624	2,962
Performance incentives and holiday bonus	3,927	4,345	1,946
Total	5,525	7,969	4,908

The number of direct employees and contract workers follows (full amount, unaudited):

	December 31,		
	2019	2018	2017
Direct employees	6,872	7,096	7,031
Contract workers	410	442	478
Papuans included in total number of direct employees and contract workers	2,765	2,890	2,893

In addition to these direct employees and contract workers, the Company employs contractors that have personnel at its operations totaling approximately 21,919 at December 31, 2019, 23,004 at December 31, 2018, and 20,591 at December 31, 2017.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

a. Basis of Preparation of the Consolidated Financial Statements

The consolidated financial statements have been prepared in accordance with Indonesia Financial Accounting Standards (PSAK), which comprise the Statements and Interpretations of Financial Accounting Standards (ISAK) issued by the Indonesia Financial Accounting Standards Board (DSAK). The consolidated financial statements are prepared in accordance with PSAK No. 1 (Revised 2013), "Presentation of Financial Statements."

The consolidated financial statements are prepared on the accrual basis, using the historical cost concept, except for certain accounts that are measured at fair value as described in the related accounting policies. The consolidated statement of cash flows is prepared using the indirect method by classifying cash flows on the basis of operating, investing and financing activities.

Certain accounting principles applied by the Company that conform with PSAK may not conform with generally accepted accounting principles and financial standards in other countries.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

a. *Basis of Preparation of the Consolidated Financial Statements (continued)*

Changes to PSAKs and ISAKs

The adoption of the new standards, amendments and interpretations issued and effective for the financial year beginning January 1, 2019 (including early adoption of PSAK No. 73), did not have a material impact to the consolidated financial statements of the Company, and are as follows:

- Amendment to PSAK No. 24, "Plan Amendment, Curtailment or Settlement," was adopted from amendments to International Accounting Standards (IAS) No. 19. The amendments specify that current service cost and net interest for the remainder of the annual reporting period after a plan amendment, curtailment or settlement are determined based on updated actuarial assumptions. The amendments clarify how the accounting for a plan amendment, curtailment or settlement affects the asset ceiling requirements.
- PSAK No. 73, "Leases," was adopted from International Financial Reporting Standards (IFRS) No. 16. The standard requires almost all leases to be recognized on the statement of financial position, as the distinction between operating and finance leases is removed. Under the new standard, an asset (the right to use the leased item) and a financial liability to pay rentals are recognized. The only exceptions are short-term and low-value leases.
- ISAK No. 33, "Foreign Currency Transactions and Advance Consideration," was adopted from International Financial Reporting Interpretations Committee (IFRIC) No. 22. This interpretation covers foreign currency transactions when an entity recognizes a non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration before the entity recognizes the related asset, expense or income.
- ISAK No. 34, "Uncertainty over Income Tax Treatments," was adopted from IFRIC No. 23. This interpretation addresses accounting for income taxes whenever tax treatments involve uncertainty that affects the application of PSAK No. 46 (revised 2014), "Income Taxes". This interpretation is applicable to uncertainties related to current and deferred income taxes and interest and penalties that are in the scope of PSAK No. 46 (revised 2014). This interpretation defines an uncertain tax treatment as a tax treatment for which there is uncertainty over whether the relevant tax authority will accept that tax treatment according to tax law and tax practice.

b. *Principles of Consolidation and Joint Arrangements*

Principles of Consolidation

The Company applies PSAK No. 65, "Consolidated Financial Statements," which among others, requires management to exercise significant judgment to determine which entities are controlled and, therefore, are required to be consolidated.

Control is achieved when the Company is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Specifically, the Company controls an investee if, and only if, the Company has all of the following (three elements of control):

- power over the investee (i.e., existing rights that give it the current ability to direct the relevant activities of the investee);
- exposure, or rights, to variable returns from its involvement with the investee; and
- the ability to use its power over the investee to affect the Company's returns.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

b. Principles of Consolidation and Joint Arrangements (continued)

Principles of Consolidation (continued)

Generally, there is a presumption that a majority of voting rights result in control. To support this presumption and when the Company has less than a majority of the voting, or similar, rights of an investee, it considers all relevant facts and circumstances in assessing whether it has power over an investee, including:

- the contractual arrangement(s) with the other vote holders of the investee;
- rights arising from other contractual arrangements; and
- the Company's voting rights and potential voting rights.

The Company reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control. Consolidation of a subsidiary begins when the Company obtains control over the subsidiary and ceases when the Company loses control of the subsidiary.

All material intercompany transactions and account balances have been eliminated.

The consolidated financial statements include the accounts of the Company and its majority-owned subsidiaries (Note 1b). The Company proportionately consolidated its unincorporated joint venture with Rio Tinto prior to December 21, 2018, when it acquired PTRTI (see Notes 1a and 1b and the following discussion for Joint Arrangements). References to "aggregate" amounts in these notes mean the total of the Company's share and Rio Tinto's share as the Company's former joint venture partner.

Joint Arrangements

The Company applies PSAK No. 66, "Joint Arrangements," which defines joint control and requires an entity that is a party to a joint arrangement to determine the type of joint arrangement in which it is involved by assessing its rights and obligations and to account for those rights and obligations in accordance with the type of joint arrangement. The Company has the following two types of joint arrangements.

Joint Operation

A joint operation is a type of arrangement in which the parties with joint control of the arrangement have rights to the assets and obligations for the liabilities relating to the arrangement. In relation to the Company's former joint arrangement with Rio Tinto, the consolidated financial statements prior to December 21, 2018, include:

- assets, including the Company's share of any assets held jointly;
- liabilities, including the Company's share of any liabilities held jointly;
- revenue from the sale of the Company's share of the output arising from the joint operation; and
- expenses, including any expenses incurred jointly.

Associates and Joint Ventures

A joint venture is a type of arrangement in which the parties with joint control of the arrangement have rights to the net assets of the arrangement, which is recognized as an investment. The Company applies PSAK No. 15 (Revised 2013), "Investments in Associates and Joint Ventures," which prescribes the accounting for investments in associated companies with respect to the determination of significant influence, accounting method to be applied and whether it is necessary to recognize impairments to the net investment.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

b. *Principles of Consolidation and Joint Arrangements (continued)*

Joint Arrangements (continued)

Associates and Joint Ventures (continued)

The Company's investment in PT Smelting is accounted for using the equity method. Under the equity method, the investment is initially recognized at cost. In subsequent periods, the investment is increased or decreased by the Company's share in net earnings or losses and dividends received from the investee since the date of acquisition. The consolidated statement of profit or loss and other comprehensive income reflects the Company's share of the results of operations of PT Smelting. Unrealized gains and losses resulting from transactions between the Company and PT Smelting are eliminated to the extent of the Company's interest.

The Company's investment in AVCO is accounted for using the cost method.

Where there has been a change recognized directly in the equity of an associate, the Company recognizes its share of any such changes and discloses this, when applicable, in the consolidated statement of changes in equity.

The Company determines at each reporting date whether there is any objective evidence that the investment in an associate is impaired. If this is the case, the Company calculates the amount of impairment as the difference between the recoverable amount of the investment in the associate and its carrying value, and recognizes the impairment amount in the consolidated statement of profit or loss and other comprehensive income.

c. *Foreign Currency Transactions*

The Company applies PSAK No. 10 (Revised 2010), "The Effects of Changes in Foreign Exchange Rates," which prescribes how to include foreign currency transactions and foreign operations in the financial statements of an entity and translate financial statements into a presentation currency. The Company considers the primary indicators and other indicators in determining its functional currency. If indicators are mixed and the functional currency is not obvious, management uses its judgment to determine the functional currency that represents the economic effects of the underlying transactions, events and conditions.

The Company has determined its functional currency is the US$, and its reporting currency, as authorized by its IUPK, is the US$. Transactions in currencies other than the US$ are initially recorded in the functional currency at the respective functional currency exchange rates prevailing at the date of the transaction. Monetary assets and liabilities denominated in such currencies are translated at the spot rate of exchange on the reporting date. All differences are recorded in the consolidated statement of profit or loss and other comprehensive income. Non-monetary items that are measured at historical cost in such currency are translated using the exchange rate at the date of the initial transaction.

The rates of exchange used for one US$ for the most significant currencies used by the Company other than US$ were as follows (full amount):

		December 31,		
	Source	2019	2018	2017
Rupiah (Rp) (Rp/$)	Bank Indonesia	13,832	14,409	13,480
Australian dollar (AUD/$)	Bank of America	1.43	1.41	1.28

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

d. Cash, Cash Equivalents and Restricted Cash

Cash and cash equivalents consist of cash on hand and in banks, time deposits and all unrestricted investments with original maturities of three months or less.

The Company's restricted cash is primarily related to its commitment for the development of a new smelter in Indonesia, guarantees and commitments for certain mine closure and reclamation obligations, and customs duty taxes. Restricted cash is classified as a current or long-term asset based on the timing and nature of when or how the cash is expected to be used or when the restrictions are expected to lapse. Restricted cash is comprised of time deposits.

e. Inventories

Inventories consist of materials and supplies, mine and mill stockpiles, and finished goods (copper concentrate). Inventories are stated at the lower of weighted-average cost or net realizable value and are removed at weighted-average cost. For all periods presented, inventories are stated at weighted-average cost, which includes the costs of purchase and appropriate overhead costs incurred in bringing the inventory to its present location and condition. Net realizable value is the estimate of the selling price in the ordinary course of the business, less the costs of completion and selling expenses. The allowance for obsolescence of materials and supplies is provided to reduce the carrying value of inventories to their net realizable value.

The mine and mill stockpiles represent ores that have been extracted from the ore body that are temporarily stored above ground for processing in future periods. Because it is impracticable to determine copper contained in the mine and mill stockpiles by physical count, reasonable estimation methods are employed. Stockpiles not expected to be processed within 12 months are classified as long-term inventory.

f. Property, Plant and Equipment

The Company applies PSAK No. 16 (Revised 2011), "Property, plant and equipment," which prescribes the accounting treatment for the recognition of the assets, the determination of the carrying amounts and the depreciation charges and impairment losses to be recognized in relation to the assets.

Property, plant and equipment are initially recognized at cost, which comprises purchase price and any costs directly attributable in bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management.

Subsequent to initial recognition, property, plant and equipment are stated at cost less accumulated depreciation and impairment losses. Such cost includes the cost of replacing part of the property, plant and equipment when that cost is incurred, if the recognition criteria are met.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the consolidated statement of profit or loss and other comprehensive income in the year the asset is derecognized.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

f. *Property, Plant and Equipment (continued)*

Construction in progress represents the accumulated costs of materials and other costs, including attributable capitalized interest costs and currency exchange gains or losses specifically related to financing the construction in progress up to the date when the asset is complete and ready for service, at which time these costs are transferred to the relevant assets. Depreciation for mining and milling life-of-mine assets, infrastructure and other common costs is determined using the unit-of-production (UOP) method based on total estimated recoverable proven and probable copper reserves. Other assets are depreciated on a straight-line basis over the estimated useful lives as follows:

	Years
Machinery and equipment	3 – 20
Mobile equipment	5 – 20

The assets' residual values, useful lives and methods of depreciation are reviewed and adjusted prospectively, if appropriate, at each financial year end unless required more often.

The Company applies PSAK No. 26 (Revised 2011), "Borrowing Costs," which requires borrowing costs that are attributable to the acquisition, construction or production of a qualifying asset to be capitalized as part of such qualifying asset. Where the funds used to finance a project from part of general borrowings, the amount capitalized is calculated using a weighted average of rates applicable to relevant general borrowings of the Company during the period. All other borrowing costs are recognized as an expense in the period in which they are incurred.

Capitalization of borrowing costs commences when the activities to prepare the qualifying asset for its intended use have started and the expenditures for the qualifying asset and the borrowing costs have been incurred. Capitalization of borrowing costs ceases when all the activities necessary to prepare the qualifying asset for its intended use are substantially completed.

g. *Exploration and Evaluation Assets, and Mine Properties*

The Company applies PSAK No. 64, "Exploration for and Evaluation of Mineral Resources," which specifies the financial reporting for the exploration and evaluation of mineral resources, and requires an entity to assess exploration assets for impairment in accordance with PSAK No. 48 (Revised 2014), "Impairment of Assets."

Mineral exploration and evaluation costs are capitalized and recognized as "Exploration and evaluation assets" for each potential significant area of interest associated with a mineral deposit where such costs are expected to be recouped through exploitation or sale, or activities have not yet reached a stage that permits a reasonable assessment of the existence of economically recoverable reserves and active and significant exploration of the area of interest is continuing.

Exploration and evaluation activity includes researching and analyzing historical exploration data, gathering exploration data through geophysical studies, exploratory drilling and sampling, determining and examining the volume and grade of the resource, surveying transportation and infrastructure requirements and conducting market and finance studies.

Exploration and evaluation assets are subsequently measured using a cost model and classified as tangible assets, unless they qualify to be recognized as intangibles.

Exploration and evaluation assets are transferred to "Under development" and "Undeveloped" after the mining properties are determined to be economically viable to be developed.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

g. *Exploration and Evaluation Assets, and Mine Properties (continued)*

Development costs are capitalized in "Under development" and "Undeveloped" mining properties beginning after proven and probable reserves have been established. Development costs include costs incurred resulting from mine pre-production activities undertaken to gain access to proven and probable reserves, including adits, drifts, ramps, permanent excavations, infrastructure and removal of overburden. Additionally, interest expense allocable to the cost of developing mining properties is capitalized up to the date when the development activities are substantially complete.

Upon completion of mine development and upon the commencement of commercial production, the "Under development" assets are transferred to the "Developed and producing mines" account, which are stated at cost, less accumulated depreciation and impairment losses. Mines are depreciated using the UOP method based on estimated recoverable proven and probable copper reserves for the ore body benefited.

h. *Deferred Stripping*

The Company applies ISAK No. 29, "Stripping Costs in the Production Phase of a Surface Mine," which prescribes the procedures to be applied by an entity to account for overburden waste removal (stripping) costs in the production phase of a surface mine. Costs incurred in undertaking stripping activities are considered to create two possible benefits - the extraction of ore (inventory) in the current period and an improved access to an ore body to be mined in a future period. Surface mining costs associated with the overburden removal at the Company's Grasberg open-pit mine that had been identified as a component of the ore body for which access had been improved (related to ore to be mined in future periods) and could be measured reliably resulted in a non-current asset ("Deferred stripping costs") on the Company's statement of financial position. The deferred stripping costs were amortized using the UOP method based on total estimated recoverable proven and probable copper reserves for the Grasberg open-pit mine.

i. *Impairment of Non-Financial Assets*

The Company applies PSAK No. 48 (Revised 2014), "Impairment of Assets," which prescribes the procedures to be applied by an entity to ensure that its assets are carried at no more than their recoverable amount. If an asset is carried at more than the amount to be recovered through use or sale of the asset, the asset is impaired and the entity is required to recognize an impairment loss. This PSAK also specifies when an entity should reverse an impairment loss and the required disclosures.

The Company assesses at each reporting date whether there is an indication that an asset may be impaired. If any such indication exists, the Company makes an estimate of the asset's recoverable amount. An asset's recoverable amount is the higher of its fair value less costs to sell and its value in use, and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. Where the carrying amount of an asset exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. Impairment losses from assets used in continuing operations are recognized in the consolidated statement of profit or loss and other comprehensive income as "impairment losses" in the categories that are consistent with the functions of the impaired assets. In assessing the value in use, the estimated net future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs to sell, recent market transactions are taken into account, if available. If no such transactions can be identified, an appropriate valuation model is used to determine the fair value of the asset. These calculations are corroborated by valuation multiples or other available fair value indicators.

Management believes that there were no indications of potential impairment of non-financial assets as of December 31, 2019.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

j. Transactions with Related Parties

The Company applies PSAK No. 7 (Revised 2010), "Related Party Disclosures," which requires disclosure of related party relationships, transactions and outstanding balances, including commitments. All significant transactions and balances with related parties are disclosed in the relevant notes herein.

k. Leases

Effective January 1, 2019, the Company adopted PSAK No. 73, which introduced a single, on-balance sheet accounting model for lessees. As a result, the Company, as a lessee, has recognized right-of-use assets representing its rights to use the underlying assets and lease liabilities representing its obligation to make lease payments. The Company applied PSAK No. 73 using the modified retrospective approach, under which the comparative information presented for 2018 and 2017 has not been restated and it is presented, as previously reported, under PSAK No. 30 (Revised 2011), "Leases."

Previously, the Company determined at contract inception whether an arrangement was or contained a lease based on the substance of the arrangement and whether the fulfillment of the arrangement was dependent on the use of a specific asset and the arrangement conveyed a right to use the asset. The Company now assesses whether an arrangement is, or contains, a lease based on the new definition of a lease. Under PSAK No. 73, an arrangement is, or contains, a lease if the arrangement conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

On transition to PSAK No. 73, the Company elected to apply the practical expedient to grandfather the assessment of which arrangements are leases. It applied PSAK No. 73 only to arrangements that were previously identified as leases. An arrangement that was not identified as a lease under PSAK No. 30 (Revised 2011) were not reassessed. Therefore, the definition of a lease under PSAK No. 73 has been applied only to arrangements entered into or changed on or after January 1, 2019.

As a lessee, the Company previously classified leases as either operating and finance leases based on its assessments of whether a lease transferred substantially all of the risks and rewards of ownership. Under PSAK No. 73, all leases are classified as financing leases. The Company has elected the exemption for leases of low-value assets as well as the short-term lease exemption for all asset classes and does not report a lease liability or right-of-use asset for leases of low-value assets or leases with a term of 12 months or less.

The adoption of PSAK No. 73 did not have a material impact on the Company.

l. Asset Retirement Obligations (ARO)

The Company records the fair value of estimated AROs associated with tangible long-lived assets in the period incurred. Retirement obligations associated with long-lived assets represent the costs to remove facilities, equipment and other assets and restore related areas for which there is a legal obligation to settle under existing or enacted law, statute, written or oral contract or by legal construction. These obligations, which are initially estimated based on discounted cash flow estimates, are accreted to full value over time through charges to cost of sales. For the Grasberg open pit, changes to the ARO are recorded in earnings. In addition, asset retirement costs are capitalized as part of the related asset's carrying value and are depreciated on a UOP basis over the respective asset's useful life. Reclamation costs for future disturbances are recognized as an ARO and as a related asset retirement cost in the period of the disturbance. The Company's AROs consist of costs associated with mine reclamation, closure and other remediation activities. These activities generally include costs for earthwork, revegetation, water treatment and demolition (Note 17).

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

m. *Reclamation and Closure Guarantees*

The Company submits five-year reclamation plans of projected ongoing reclamation activities at its operations to the Indonesia Department of Energy and Mineral Resources in compliance with its commitments under its previously approved environmental management plan. The Company's latest plan for projected ongoing reclamation activities from 2019 through 2021 was submitted in January 2019 and approved by the Ministry of Energy and Mineral Resources in February 2019. In May 2018, the Ministry of Energy and Mineral Resources issued a new regulation that requires a company to provide a mine closure guarantee in the form of a time deposit placed in a state-owned bank in Indonesia, or a bank guarantee issued by a state-owned bank in Indonesia. As a result of the new regulation, the Company elected to provide a bank guarantee (Notes 17 and 19). The bank guarantee must be increased each year for that year's projected reclamation activities and may be reduced upon the Company providing evidence to the government that the reclamation activities have been performed, and the government providing a formal notice releasing the guarantee. In July 2019, the Ministry of Energy and Mineral Resources approved the Company's mine closure plan, and the Company is required to fund the next mine closure guarantee in 2025.

n. *Revenue Recognition*

The Company early adopted PSAK No. 72, "Revenue from Contracts with Customers," effective January 1, 2018, under the modified retrospective approach applied to contracts that remain in force at the adoption date. The adoption of this standard did not result in any financial statement impacts or changes to the Company's revenue recognition policies or processes as revenue is primarily derived from arrangements in which the transfer of control coincides with the fulfillment of performance obligations.

The Company's sales of copper concentrate (the resulting product from the concentrating process that is composed predominantly of copper sulfide minerals), which also contain significant quantities of gold and silver, are recognized in revenues upon transfer of control in an amount that reflects the consideration it expects to receive in exchange for its concentrate. The transfer of control is in accordance with the terms of customer contracts, which is at the point the copper concentrate is moved over the rail of third-party marine vessels at the Company's port facility at Amamapare, Papua, Indonesia.

Revenues from the Company's copper concentrate sales are initially recorded based on a provisional sales price later adjusted to the final sales price calculated in accordance with the terms specified in the relevant sales contract. Revenues from copper concentrate sales are recorded net of royalties, export duties, treatment and all refining charges (including price participation, if applicable) and the impact of derivative contracts, if any. Moreover, because a portion of the metals contained in copper concentrate is unrecoverable as a result of the smelting process, the Company's revenues from copper concentrate sales are also recorded net of allowances based on the quantity and value of these unrecoverable metals. These allowances are a negotiated term of the Company's contracts and vary by customer. Treatment and refining charges represent payments to smelters and refiners and are either fixed, or in certain cases, vary with the price of copper.

The Company's copper concentrate sales agreements, including its sales to Atlantic Copper, S.L.U. (Atlantic Copper, a wholly owned subsidiary of FCX involved in the smelting and refining business in Spain) and PT Smelting, provide for provisional billings, which are prevalent in the industry, based on world metals prices when shipped, primarily using then-current prices on the LME. Final settlement of the copper portion is generally based on quoted monthly average LME copper settlement prices for a specified future month, generally the first, second or third month after the month of arrival at the customer's facility. Final delivery to customers in Asia generally takes up to 25 days and to customers in Europe generally takes up to 55 days.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

n. *Revenue Recognition (continued)*

Under PSAK No. 55 (Revised 2014), "Financial Instruments: Recognition and Measurement," the Company's sales based on a provisional sales price contain an embedded derivative that is required to be bifurcated from the host contract. The host contract is the sale of the metals contained in the concentrate at the then-current LME settlement price. The embedded derivative, which does not qualify for hedge accounting, is marked to fair value through earnings each subsequent period until final settlement, using the period-end forward prices for the expected settlement date (Note 20).

Gold sales are priced according to individual contract terms, generally the average LBMA gold settlement price for a specified month near the month of shipment (Note 20).

o. *Pension Plan*

The Company applies PSAK No. 24 (revised 2013), "Employee Benefits," which establishes the accounting and disclosures for employee benefits and requires the recognition of a liability and expense when an employee has provided service and the entity receives an economic benefit arising from the service.

The liability recognized in the consolidated statement of financial position in respect of defined benefit plans is the present value of the defined benefit obligation at the statement of financial position date less the fair value of plan assets, adjusted for any effect of the asset ceiling. The defined benefit obligation is calculated annually by an independent actuary using the projected-unit-credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of GOI bonds that are denominated in the currency in which the benefit will be paid, and that have terms to maturity approximating the terms of the related pension liability. Actuarial gains or losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity through other comprehensive income in the period in which they arise.

Past-service costs are recognized immediately in profit or loss. Gains or losses related to a curtailment or settlement are recognized in profit or loss when the curtailment or settlement occurs.

The Company is required to provide a minimum amount of pension benefits in accordance with Labor Law No. 13/2003. The Company's pension liability based on the calculation of the benefit obligation performed by the actuary provides that the expected benefits under the Company's pension plan will at least equal the minimum requirements of the Labor Law.

p. *Share-Based Payments*

The Company does not grant share-based payment awards of its common stock to its employees. Share-based payment awards granted to the Company's employees include options to purchase shares of FCX common stock under FCX's plans. Such stock option awards are measured at fair value and charged to expense over the requisite service period for awards that are expected to vest. The fair value of stock options is determined using the Black-Scholes-Merton option valuation model. In addition, compensation costs for other stock-based awards (*i.e.*, restricted stock units) granted under the FCX plans to the Company's employees are recognized based on FCX's common stock price on the date of grant. FCX estimates forfeitures at the time of grant and revises those estimates in subsequent periods if actual forfeitures differ from those estimates through the final vesting date of the awards. See Note 5 for further discussion.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

q. *Taxes*

Income Taxes

The Company applies PSAK No. 46 (revised 2014), which requires the Company to account for the current and future tax consequences of the future recovery (settlement) of the carrying amount of assets (liabilities) that are recognized in the statement of financial position, and transactions and other events of the current period that are recognized in the financial statements. As it pertains to underpayments/ overpayment of income tax, the Company presents interest, if any, as part of interest expense, and presents penalties, if any, as part of other expense, rather than in the provision for income taxes.

Current tax expense is provided based on the estimated taxable income for the period. Deferred tax assets and liabilities are recognized for temporary differences between the financial and the tax bases of assets and liabilities at each reporting date. Substantially, all these differences relate to property, plant, equipment, exploration and development costs. Future tax benefits, such as the carryforward of unused tax losses, are also recognized to the extent that realization of such benefits is probable. The tax effects for the period are allocated to current operations, except for the tax effects from transactions that are directly charged or credited to equity.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the statement of financial position dates. Changes in the carrying amount of deferred tax assets and liabilities as a result of a change in tax rates are credited or charged to current operations, except to the extent that they relate to items previously charged or credited to equity.

Adjustments to tax obligations are recorded when an assessment is received or, if appealed by the Company and its subsidiaries, when the result of the appeal is determined.

The Company's policy associated with uncertain tax positions is to record accrued interest in interest expense and accrued penalties in other expense rather than in the provision for income taxes.

Value-added Tax (VAT)

Revenues, expenses, assets and liabilities are recognized net of the amount of VAT except:

- where the VAT incurred on a purchase of assets or services is not recoverable from the taxation authority, in which case that VAT is recognized as part of the cost of acquisition of the asset or as part of the expense item, as applicable; and
- when receivables and payable are stated with the amount of VAT included.

The net amount of VAT recoverable from, or payable to, the taxation authority is included as part of prepaid taxes or payables in the consolidated statement of financial position.

r. *Financial Instruments*

The Company applies PSAK No. 50 (Revised 2014), “Financial Instruments: Presentation,” PSAK No. 55 (Revised 2014), “Financial Instruments: Recognition and Measurement,” and PSAK No. 60 (Revised 2014), “Financial Instrument: Disclosures.” PSAK No. 50 (Revised 2014) establishes the principles for presenting financial instruments as liabilities or equity and for offsetting financial assets and liabilities. PSAK No. 55 (Revised 2014) establishes the principles for recognizing and measuring financial assets, financial liabilities and some contracts to buy or sell non-financial items. PSAK No. 60 (Revised 2014) requires disclosures in financial statements that enable users to evaluate the significance of financial instruments for financial position and performance; and the nature and extent of risks arising from financial instruments to which the entity is exposed during the period and at the end of the reporting period, and how the entity manages those risks.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

r. Financial Instruments (continued)

Financial assets are classified as financial assets at fair value through profit or loss, loans and receivables, held-to-maturity investments, available-for-sale financial assets, or as derivatives designated as hedging instruments in an effective hedge, as appropriate. The Company determines the classification of its financial assets at initial recognition. All financial assets are recognized initially at fair value plus, in the case of investments not recorded at fair value through profit or loss, directly attributable transaction costs.

Purchases or sales of financial assets that require delivery of assets within a time frame established by regulation or convention in the market place (regular way trades) are recognized on the trade date, *i.e.*, the date the Company commits to purchase or sell the asset.

The fair value of financial instruments that are actively traded in organized financial markets is determined by reference to quoted market bid prices at the close of business at the end of the reporting period. For financial instruments where there is no active market, fair value is determined using valuation techniques. Such techniques may include using recent arm's-length market transactions, reference to the current fair value of another instrument that is substantially the same, discounted cash flow analysis or other valuation models.

Financial assets and liabilities are offset and the net amount reported in the consolidated statement of financial position if, and only if, there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, or to realize the assets and settle the liabilities simultaneously.

Derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative. Any gains or losses arising from changes in fair value of derivatives during the period that do not qualify for hedge accounting are recognized immediately in the consolidated statement of profit or loss and other comprehensive income.

As described under "Revenue Recognition," certain of the Company's copper concentrate sales contracts allow for final pricing in future periods. The Company applies the normal purchases and normal sales exemption in accordance with derivatives and hedge accounting guidance to the host sales agreements since the contracts do not allow for net settlement and always result in physical delivery. Under PSAK No. 55 (Revised 2014), these pricing terms cause a portion of the contracts to be considered embedded derivatives that are required to be recorded at fair value (Note 20). The recorded value of these embedded derivatives is presented with the related host contract in the consolidated statement of financial position line item that appropriately represents the overall future cash flows for the instrument taken as a whole.

At times, the Company has entered into derivative contracts to manage certain market risks resulting from fluctuations in commodity prices (primarily copper and gold) by creating offsetting market exposures. See Note 20 for a summary of the Company's outstanding derivative instruments and a discussion of the Company's risk management strategies.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

r. Financial Instruments (continued)

Other financial instruments include cash and cash equivalents, restricted cash, trade receivables, other receivables, long-term notes and accounts receivable, which are financial assets classified as loans and receivables. Financial liabilities include trade payables, accrued liabilities, unearned customer receipts, royalties payable, finance lease obligation and long-term debt. These financial instruments are initially recognized at fair value and subsequently measured at amortized cost using the effective interest rate (EIR) method. Interest is recognized in the consolidated statement of profit or loss and other comprehensive income for interest-bearing financial loans and receivables. Gains and losses are recognized in the consolidated statement of profit or loss and other comprehensive income when these financial instruments are derecognized or impaired, as well as through the amortization process. The carrying value of these financial instruments, except for long-term debt, approximates fair value. Long-term debt is recorded at amortized cost, which does not approximate fair value.

The Company applies PSAK No. 68, "Fair Value Measurement," which provides guidance on how to measure fair value when fair value is required or permitted. The fair value of an asset or a liability is measured using the assumptions that market participants would use when pricing the asset or liability, assuming that market participants act in their economic best interest. Fair value related disclosures for financial instruments are included in Note 20.

Impairment of financial assets

The Company assesses at the end of each reporting period whether there is any objective evidence that a financial asset or a group of financial assets is impaired.

For loans and receivables carried at amortized cost, the Company first assesses whether objective evidence of impairment exists individually for financial assets that are individually significant, or collectively for financial assets that are not individually significant. If the Company determines that no objective evidence of impairment exists for an individually assessed financial asset, whether significant or not, it includes the asset in a group of financial assets with similar credit-risk characteristics and the group is collectively assessed for impairment. Assets that are individually assessed for impairment and for which an impairment loss is, or continues to be, recognized are not included in a collective assessment of impairment.

If there is objective evidence that an impairment loss has occurred, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future expected credit losses that have not yet been incurred). The present value of the estimated future cash flows is discounted at the financial asset's original EIR. If a loan or receivable has a variable interest rate, the discount rate for measuring impairment loss is the current EIR.

If an impairment has occurred, the carrying amount of the asset is reduced through the use of an allowance account and the amount of the loss is recognized in the consolidated statement of profit or loss and other comprehensive income. Interest income continues to be accrued on the reduced carrying amount based on the rate of interest used to discount future cash flows for the purpose of measuring impairment loss. Loans and receivables, together with the associated allowance, are written off when there is no realistic prospect of future recovery and all collateral has been realized or has been transferred to the Company. If, in a subsequent period, the amount of the estimated impairment loss increases or decreases because of an event occurring after the impairment was recognized, the previously recognized impairment loss is increased or reduced by adjusting the allowance account. If a future write-off is later recovered, the recovery is recognized in the consolidated statement of profit or loss and other comprehensive income.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

r. Financial Instruments (continued)

Derecognition of financial assets and liabilities

Financial Assets

A financial asset (or where applicable, a part of a financial asset or part of a group of similar financial assets) is derecognized when: (a) the rights to receive cash flows from the asset have expired; or (b) the Company has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a "pass-through" arrangement and either (i) the Company has transferred substantially all the risks and rewards of the asset, or (ii) the Company has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

Financial Liabilities

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or has expired.

When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognized in the consolidated statement of profit or loss and other comprehensive income.

s. Earnings Per Share

The Company applies PSAK No. 56 (Revised 2011), "Earnings Per Share," which requires the computation of basic earnings per share by dividing net profit by the weighted-average number of shares outstanding during the period. The Company had no dilutive securities for any of the periods presented; therefore, no diluted earnings per share were disclosed.

t. Segment Information

Segment information is based on PSAK No. 5 (Revised 2009), "Operating Segments," which requires disclosures that will enable users of financial statements to evaluate the nature and financial effects of the business activities in which the entity engages and the economic environments in which it operates. A segment is a distinguishable component of an entity that is engaged either in providing certain products (business segment), or in providing products within a particular economic environment (geographic segment), which is subject to risks and rewards that are different from those of other segments. Based on the information used by management in evaluating the performance of the Company and its subsidiaries, the Company has only one reportable segment (mining exploration, development and production). All of the operational activities of the Company and its subsidiaries are conducted in Indonesia.

u. Source of Estimation Uncertainty

The preparation of the Company's financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the disclosures of contingent liabilities, at the end of the reporting period that affect the amounts reported in these financial statements and accompanying notes. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of the asset and liability affected in the future periods. The more significant areas requiring the use of management estimates include mineral reserve estimation; useful asset lives for depreciation and amortization; deferred stripping costs; allowances for obsolete inventory; asset retirement costs; pension, postretirement and other employee benefits; deferred taxes and valuation allowances; and future cash flows associated with assets. Actual results could differ from those estimates.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

u. Source of Estimation Uncertainty (continued)

Judgments

Classification of Financial Assets and Liabilities

The Company determines the classifications of certain assets and liabilities as financial assets and financial liabilities by judging if they meet the definition set forth in PSAK No. 55 (Revised 2014). Accordingly, the financial assets and financial liabilities are accounted for in accordance with the Company's accounting policies disclosed in Note 2r.

Functional Currency

The functional currency for the Company is the currency of the primary economic environment in which the entity operates. The Company has determined its functional currency is the US$. Determination of functional currency may involve certain judgments to determine the primary economic environment and the Company reconsiders its functional currency if there is a change in events and conditions that determined the primary economic environment.

Production Start Date

The Company assesses the stage of each mine under construction to determine when a mine moves into the production phase. The pre-commercial production phase starts when ore is extracted during the development activity for the purpose of obtaining access to the ore body, while the production phase starts when the mine is substantially complete and ready for its intended use. The criteria used to assess the start date are determined based on the unique nature, complexity and location of each mine construction project. The Company considers various relevant criteria to assess when the production phase is considered to have commenced. At this point, all related amounts are reclassified from "Under development" to "Developed and producing mines" and/or "Property, plant and equipment." Some of the criteria used to identify the production start date include, but are not limited to:

- level of capital expenditure incurred compared with the original construction cost estimate;
- completion of a reasonable period of testing of the mine plant and equipment;
- ability to produce metal in saleable form (within specifications); and
- ability to sustain ongoing production of metal at mine design capacity.

When a mine development project moves into the production phase, the capitalization of certain mine development costs ceases and costs are either regarded as forming part of the cost of inventory or expensed, except for costs that qualify for capitalization relating to mining asset additions or improvements, underground mine development or mineable reserve development. It is also at this point that depreciation/amortization commences.

Estimates and Assumptions

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date that have a significant risk of causing a material adjustment to carrying amounts of assets and liabilities within the next financial year are disclosed below. The Company based its assumptions and estimates on parameters available when the financial statements were prepared. Existing circumstances and assumptions about future developments may change as a result of market changes or circumstances arising beyond the control of the Company. Such changes are reflected in the assumptions when they occur.

Income Taxes

Significant judgment is involved in determining the provision for corporate income tax. There are certain transactions for which the ultimate tax determination is uncertain. The Company recognizes liabilities for expected corporate income tax issues based on estimates of whether additional corporate income tax will be due.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

u. Source of Estimation Uncertainty (continued)

Estimates and Assumptions (continued)

Financial Instruments

The Company carries certain financial assets and liabilities at fair value, which requires the use of accounting estimates. While significant components of fair value measurement were determined using verifiable objective evidence, the amount of changes in fair value could differ if the Company utilized a different valuation methodology. Any changes in fair value of these financial assets and liabilities could directly affect the Company's profit or loss. The carrying amount of financial assets and liabilities carried at fair value in the consolidated statement of financial position is disclosed in Note 20.

When the fair values of non-financial assets need to be determined, (*e.g.*, for the purposes of calculating fair value less cost to sell for impairment testing purposes), fair value is measured using valuation techniques, including the discounted cash flow model. The inputs to these models are taken from observable markets where possible, but where this is not feasible, a degree of judgment is required in establishing fair values. Judgments include considerations of inputs such as liquidity risk, credit risk and volatility. Changes in assumptions about these factors could affect the reported fair value of financial instruments.

Recoverability of Assets

Impairment assessments require the use of estimates and assumptions, such as long-term commodity prices (considering current and historical prices, price trends and related factors), discount rates, operating costs, future capital requirements, closure and rehabilitation costs, exploration potential, reserves and operating performance (which includes production and sales volumes). These estimates and assumptions are subject to risk and uncertainty. Therefore, there is a possibility that changes in circumstances will impact these projections, which may impact the recoverable amount of assets. In such circumstances, some or all of the carrying amount of the assets may be further impaired or the impairment charge reduced with the impact recognized in the consolidated statement of profit or loss and other comprehensive income.

Ore Reserves and Resource Estimates

Ore reserves are estimates of the amount of ore that can be economically and legally extracted from the Company's mining area. The determination of the Company's ore reserves involves numerous uncertainties with respect to the ultimate geology of the ore bodies, including quantities, grades and recovery rates. Estimating the quantity and grade of reserves requires the Company to determine the size, depth and shape of its ore bodies by analyzing geological data, such as samplings of drill holes, tunnels and other underground workings. In addition to the geology of its mine, assumptions are required to determine the economic feasibility of mining these reserves, including estimates of foreign exchange rates, future commodity prices and demand, the mining methods the Company uses and the related costs incurred to develop and mine its reserves. The Company's estimates of ore reserves are prepared by and are the responsibility of its employees, which are reviewed annually and verified by independent experts in mining, geology and reserve determination. Changes in the reserve estimates may have an impact on the carrying value of fixed assets (Note 8), mine properties (Note 9), asset retirement costs (Note 17) and recognition of deferred tax assets (Note 15).

Exploration and Evaluation Expenditures (Note 9)

The application of the accounting policy for exploration and evaluation expenditures requires judgment in determining whether future economic benefits are likely either from future exploitation or sale, or where activities have not reached a stage that permits a reasonable assessment of the existence of reserves.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

u. Source of Estimation Uncertainty (continued)

Estimates and Assumptions (continued)

Exploration and Evaluation Expenditures (Note 9) (continued)

The deferral policy requires management to make certain estimates and assumptions about future events or circumstances, in particular whether an economically viable extraction operation can be established. Estimates and assumptions may change if new information becomes available. If, after an expenditure is capitalized, information becomes available suggesting that the recovery of the expenditure is unlikely, the amount capitalized is written off in the consolidated statement of profit or loss and other comprehensive income in the period when the new information becomes available.

Provision for employee benefits (Note 16)

The determination of the Company's obligations and cost for pension, postretirement and other employee benefits is dependent on its selection of certain assumptions used by the independent actuaries in calculating such amounts. Those assumptions include discount rates, future annual salary increases, annual employee turn-over rate, disability rate, retirement age and mortality rate. While the Company believes that its assumptions are reasonable and appropriate, because of the long-term nature of these obligations, such estimates are subject to significant uncertainty.

UOP Depreciation (Note 8)

Estimated economically recoverable copper reserves are used in determining the depreciation and/or amortization of mine specific assets. This results in a depreciation/amortization charge proportional to the depletion of the anticipated remaining life-of-mine production. Each asset's life, which is assessed annually, depends on both its physical life limitations and present assessments of economically recoverable copper reserves of the mine property at which the asset is located. These determinations require the use of estimates and assumptions, including the amount of recoverable copper reserves. Changes in these estimates are accounted for prospectively.

AROs (Note 17)

The Company estimates its AROs using an expected cash flow approach. The fair value of these obligations is measured as the present value of cash flow estimates after considering inflation and then applying a market-risk premium. The Company applies an estimated long-term inflation rate and discounts the projected cash flows at its estimated risk-free interest rate. After discounting the projected cash flows, a market-risk premium (currently 10 percent) is applied to reflect what a third party might require to assume these AROs. The market-risk premium is based on market-based estimates of rates that a third party would have to pay to insure its exposure to possible future increases in the value of these obligations.

Inventories (Note 6)

Net realizable value tests are performed at each reporting date and represent the estimated future sales price of the product the Company expects to realize when the product is processed and sold, less estimated costs to complete production and bring the product to sale. Where the time value of money is material, these future prices and costs to complete are discounted.

Stockpiles are measured by estimating the number of tonnes added and removed from the stockpile, and the estimated recovery percentage is based on the expected processing method. Stockpile tonnages are verified by monthly surveys.

Contingencies (Note 19)

By their nature, contingencies will only be resolved when one or more uncertain future events occur or fail to occur. The assessment of the existence, and potential amount, of contingencies inherently involves the exercise of significant judgment and the use of estimates regarding the outcome of future events.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

v. Current Versus Non-current Classification and Reclassifications

The Company presents assets and liabilities in the consolidated statement of financial position based on current and non-current classification. An asset is current when either (a) it is expected to be realized or intended to be sold or consumed in the normal operating cycle; (b) it is held primarily for the purpose of trading; (c) it is expected to be realized within 12 months after the reporting period; or (d) it is cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least 12 months after the reporting period. All other assets are classified as non-current. A liability is current when either (a) it is expected to be settled in the normal operating cycle; (b) it is held primarily for the purpose of trading; (c) it is due to be settled within 12 months after the reporting period; or (d) there is no unconditional right to defer the settlement of the liability for at least 12 months after the reporting period. All other liabilities are classified as non-current. Deferred tax assets and liabilities are classified as non-current assets and liabilities.

Certain prior year amounts have been reclassified to conform with the current year presentation.

3. CASH AND CASH EQUIVALENTS

A summary of cash and cash equivalents follows:

	December 31,		
	2019	2018	2017
Cash on hand	288	287	298
Cash in banks:			
US dollar accounts	3,033	6,792	34,164
Rupiah accounts	2,791	4,263	8,685
Singapore dollar accounts	109	98	433
Total cash in banks	5,933	11,153	43,282
Cash equivalents:			
Time deposits			
Rupiah accounts	—	—	2,893
Money Market Fund			
US dollar accounts	—	—	58,000
Total cash equivalents	—	—	60,893
Total cash and cash equivalents	6,221	11,440	104,473

Average annual interest rates applicable to the cash equivalent investments above are as follows:

	December 31,		
	2019	2018	2017
Time deposits			
Rupiah accounts	—	—	3.6%
Money Market Fund			
US dollar accounts	—	—	1.4%

Cash in banks earns interest at floating rates based on daily bank deposit rates.

As of December 31, 2019, there were no cash and cash equivalents with related parties or pledged as collateral for borrowings.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

4. TRADE AND OTHER RECEIVABLES

Trade receivables consist of the following:

	December 31,		
	2019	2018	2017
Third parties:			
Cliveden Trading AG	4,308	—	—
Gerald Metals Sarl	1,445	—	—
Hindalco Industries Limited	—	47,948	14,182
Jinchuan Group Ltd.	—	24,683	8,310
Glencore Ag	—	17,320	—
Jiangxi Copper Company Limited	—	5,931	8,527
Sumitomo Metal Mining Co., Ltd.	—	5,671	45,936
Philippine Associated Smelting	—	5,465	51,276
LS-Nikko Copper Inc.	—	4,989	44,684
Mitsubishi Materials Corporation	—	4,776	79,307
Pan Pacific Copper Co., Ltd.	—	4,669	56,669
Metal Challenge Co., Ltd	—	3,532	—
Yanggu Xiangguang Copper Co., Ltd.	—	1,917	15,726
Vendanta Limited - Sterlite Copper	—	—	54,616
Mercuria Energy Trading S.A.	—	—	4,321
Fuukawa Metals & Resources Co., Ltd	—	—	4,062
Other	1,687	1,124	218
Total for third parties	7,440	128,025	387,834
Related parties (PT Smelting)	260,515	175,970	307,815
Total	267,955	303,995	695,649

The aging analysis of trade receivables is as follows

	December 31,		
	2019	2018	2017
0 - 30 days	154,887	203,531	480,366
31 - 60 days	84,018	10,833	96,995
61 - 90 days	17,355	16,779	75,492
> 90 days	11,695	72,852	42,796
Total	267,955	303,995	695,649

All trade receivables are denominated in US$.

Management believes that all trade receivables are current and fully collectible and, therefore, no impairment is considered necessary. As of December 31, 2019, none of the trade receivables have been pledged as collateral or are interest-bearing.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

4. TRADE AND OTHER RECEIVABLES (continued)

Other receivables consist of the following:

	December 31,		
	2019	2018	2017
Third parties:			
Contract services	169,944 [a]	2,486	2,644
Employee loans	6,728	6,271	6,431
Non-income tax receivables	—	—	176
Export duty tax receivables (Note 19)	—	15,043	—
Other	82	108	7,345
Total for third parties	176,754	23,908	16,596
Related parties:			
PT Smelting VAT receivables	—	14,773	45,795
Other	1,668	2,591	277
Total for related parties	1,668	17,364	46,072

a. The increase in 2019, compared with 2018 and 2017, is primarily associated with contractor receivables for benefits in kind to comply with the Company's IUPK.

All other receivables are denominated in US$.

5. TRANSACTIONS WITH RELATED PARTIES

The nature of transactions and relationships with related parties is as follows:

Related Parties	Relationship with the Related Parties	Transactions
PT Smelting	Associated company	Sales of copper concentrate
AVCO	Associated company	Operates Timika airport
Atlantic Copper, S.L.U. (Atlantic Copper)	Shareholder's affiliate	Sales of copper concentrate
PT Puncakjaya Power	Shareholder's affiliate	Provider of power and related operation, maintenance and management services
PT Eksplorasi Nusa Jaya	Shareholder's affiliate	Mining consulting services
International Air Capital Inc. (IAC)	Shareholder's affiliate	The Company provides loans for IAC's capital expenditures
International Purveyors Inc.	Shareholder's affiliate	Procurement of materials and supplies and services used in the mining operations
FM Services Company (FMS) and its wholly owned subsidiary, International Administrative Services Company	Shareholder's affiliate	Provides certain technical, management, administrative, financial and other services on behalf of the Company (Note 24)
Sociedad Minera Cerro Verde S.A.A. (Cerro Verde)	Shareholder's affiliate	Sales of haul trucks
Freeport-McMoRan Morenci Inc. (Morenci)	Shareholder's affiliate	Sales of haul trucks
Freeport-McMoRan Bagdad Inc. (Bagdad)	Shareholder's affiliate	Sales of haul trucks
FCX	Shareholder	Provides loans (Note 24), and share-based and other incentive compensation benefits to certain of the Company's employees

(Amounts in tables in thousand United States dollars, unless otherwise stated)

5. TRANSACTIONS WITH RELATED PARTIES (continued)

Related Parties	Relationship with the Related Parties	Transactions
Dana Pensiun Freeport Indonesia	The Company is the founder of the pension fund. The fund is for the benefit of the Company's employees	Contributions to the defined benefit pension plan (Note 16)
PTI	Shareholder	Issuance of shares capital (Note 21)
PT Inalum	Shareholder	Issuance of shares capital and capital contributions to the Company (Note 21)

PT Smelting

In the regular course of its business, the Company sells copper concentrate to PT Smelting (see Note 24 for further discussion of the agreement).

AVCO

AVCO operates the Timika airport in the Papua province of Indonesia under a contract with the Company.

Atlantic Copper

In the regular course of its business, the Company sells copper concentrate at market prices to Atlantic Copper, FCX's wholly owned smelting and refining subsidiary in Spain (see Note 24 for further discussion of the agreement).

PT Puncakjaya Power

PT Puncakjaya Power (Puncakjaya Power) is the owner of the assets supplying substantially all of the power needs for the Company's operations, including the 3x65 megawatt coal-fired power facilities located at the Port of Amamapare in Papua, Indonesia. Puncakjaya Power also charges the Company for certain operation, maintenance and management costs associated with the operation of the power facilities. The Company's aggregate payments to Puncakjaya Power totaled US$20.7 million in 2019, US$29.5 million (US$28.8 million net to the Company after former Rio Tinto joint venture sharing) in 2018 and US$39.8 million (US $34.6 million net to the Company after former Rio Tinto joint venture sharing) in 2017.

PT Eksplorasi Nusa Jaya

PT Eksplorasi Nusa Jaya, a wholly owned subsidiary of FCX, provides general services associated with the Company's mineral exploration activities, including related management/administrative information systems and logistics support. Services performed are charged to the Company at amounts approximating those that would be incurred if such services were performed by its own employees.

International Air Capital Inc.

IAC, a wholly owned subsidiary of FCX, is provided loans from the Company for its capital expenditures.

International Purveyors Inc.

International Purveyors Inc., a wholly owned subsidiary of FMS, is a purchasing agent in Australia that procures materials and supplies and commodities for the Company's mining and milling operations.

FMS

FMS, a wholly owned subsidiary of FCX, provides services necessary to support the Company's operations and activities, including mining operations consultation and advice, exploration, geology, management information technology, other administrative services and other such services as may be requested by the Company. The monthly service fee is US$9.2 million, subject to annual inflation adjustments.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

5. TRANSACTIONS WITH RELATED PARTIES (continued)

Cerro Verde, Morenci and Bagdad
The Company sold haul trucks to Cerro Verde, Morenci and Bagdad, which are each indirect subsidiaries of FCX.

FCX
FCX provides loans to the Company from time to time under a US$2.0 billion revolving credit note (see Note 14 for further discussion of the agreement).

FCX has granted stock options and restricted stock units of its common stock (which is publicly traded on the New York Stock Exchange in the US) to certain Company employees as part of its incentive compensation program. A stock option award gives the recipient the right to buy FCX's common stock at a specified price within a certain period or by a specified date, subject to certain vesting requirements. A restricted stock unit is a grant of FCX common stock issued to an individual that is not fully transferable until the vesting requirement is satisfied. FCX charges the related compensation costs in connection with these stock-based awards to the Company. No significant amounts of stock-based compensation costs were capitalized during the periods presented. See the following section, "FCX Stock Awards," for additional information regarding compensation costs relating to FCX stock-based awards charged to the Company.

FCX has adopted other employee benefit plans with performance-based award criteria in which employees of the Company and FMS participate. In 2019, the costs of such plans as well as FCX stock-based compensation plans related to FMS employees are included in the monthly service fee paid to FMS (see Notes 23 and 24). Costs of such plans charged to the Company and recognized in exploration costs, production costs, general and administrative expenses, and selling and marketing expenses totaled US$33.6 million in 2018 and US$32.0 million in 2017. The costs of FCX stock-based compensation plans related to FMS employees charged to the Company totaled US$18.5 million in 2018 and US$12.1 million in 2017.

FCX Stock Awards
Stock options granted under FCX's plans expire 10 years after the date of grant. Stock options granted prior to 2018 vest in 25 percent annual increments and, beginning in 2018, stock options granted vest in 33 percent annual increments beginning one year from the date of grant. The award agreements provide that participants will receive the following year's vesting upon retirement. Therefore, on the date of grant, the Company accelerates one year of amortization for retirement-eligible employees. Stock options provide for accelerated vesting only upon certain qualifying terminations of employment within one year following a change of control.

A summary of outstanding FCX stock options activity for the Company's employees during the year ended December 31, 2019, follows:

	Number of Stock Options	Weighted-Average Exercise Price (US$ per option)	Weighted-Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (US$)
Balance as of December 31, 2018	4,031,145	28.56		
Granted	1,090,000	11.89		
Exercised	(98,750)	5.76		
Transferred/expired/forfeited	(533,167) [a]	24.81		
Balance as of December 31, 2019	4,489,228	25.62	5.08	4,220
Vested and exercisable at December 31, 2019	3,098,317	31.37	3.48	2,373

a. Included stock options for employees who transferred to or from the Company from or to other FCX subsidiaries.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

5. TRANSACTIONS WITH RELATED PARTIES (continued)

The fair value of each stock option is estimated on the date of grant using the Black-Scholes-Merton option valuation model. Expected volatility is based on implied volatilities from traded options on FCX's publicly traded common stock and historical volatility of FCX's publicly traded common stock. Historical data is used to estimate future option exercises, forfeitures and expected life. The expected dividend rate for FCX's publicly traded common stock is calculated using the then-current annual dividend (excluding supplemental dividends) at the date of grant. The risk-free interest rate is based on US Federal Reserve rates in effect for bonds with maturity dates equal to the expected term of the option at the grant date.

The weighted-average assumptions used to value FCX stock option awards to the Company's employees follow:

	Years Ended December 31,		
	2019	2018	2017
Expected volatility	47.8%	46.1%	51.4%
Expected life of options (in years)	6.1	5.9	5.7
Expected dividend rate	1.8%	1.2%	—
Risk-free interest rate	2.5%	2.6%	2.0%

The grant-date fair value using the Black-Scholes-Merton model was US$4.87 per option during 2019, US $7.84 per option during 2018 and US$7.61 during 2017.

Stock-settled restricted stock units (RSUs) granted under FCX's plans vest over three years or at the end of three years to certain employees. Some award agreements allow for participants to receive the following year's vesting upon retirement. Therefore, on the date of grant of these RSU awards, the Company accelerates one year of amortization for retirement-eligible employees. The award agreements provide for accelerated vesting of all RSUs held by employees if they experience a qualifying termination within one year following a change of control. Dividends attributable to stock-settled RSUs accrue and are paid if the award vests.

A summary of outstanding stock-settled RSUs activity for the Company's employees during the year ended December 31, 2019, follows:

	Number of Stock-Settled RSUs	Aggregate Intrinsic Value (US$)
Balance at December 31, 2018	176,929	
Granted	8,000	
Vested	(88,265)	
Transferred/forfeited	(11,333) [a]	
Balance at December 31, 2019	85,331	1,120

a. Included RSUs for employees who transferred to or from the Company from or to other FCX subsidiaries.

The total grant-date fair value of stock-settled RSUs was US$0.1 million during 2019, US$1.8 million during 2018 and US$1.2 million during 2017.

Cash-settled RSUs are similar to stock-settled RSUs, but are settled in cash rather than in shares of common stock. These cash-settled RSUs vest over three years of service. Some award agreements allow for participants to receive the following year's vesting upon retirement. Therefore, on the date of grant of these cash-settled RSU awards, the Company accelerates one year of amortization for retirement-eligible employees. The cash-settled RSUs are classified as liability awards, and the fair value of these awards is remeasured each reporting period until the vesting dates. The award agreements for cash-settled RSUs provide for accelerated vesting upon certain qualifying terminations of employment within one year following a change of control. Dividends attributable to cash-settled RSUs accrue and are paid if the award vests.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

5. TRANSACTIONS WITH RELATED PARTIES (continued)

A summary of outstanding cash-settled RSUs activity for the Company's employees during the year ended December 31, 2019, follows:

	Number of Cash-Settled RSUs	Aggregate Intrinsic Value (US$)
Balance at December 31, 2018	278,159	
Granted	1,500	
Vested	(135,995)	
Transferred/forfeited	8,500 [a]	
Balance at December 31, 2019	152,164	1,996

a. Included cash-settled RSUs for employees who transferred to or from the Company from or to other FCX subsidiaries.

The total grant-date fair value of cash-settled RSUs was less than US$0.1 million during 2019, US$2.9 million during 2018 and US$1.7 million during 2017. The total accrued liability associated with cash-settled RSUs totaled US$1.7 million at December 31, 2019, US$2.0 million at December 31, 2018, and US$2.4 million at December 31, 2017.

6. INVENTORIES, NET

The components of inventories, net follow:

	December 31,		
	2019	2018	2017
Materials and supplies	670,642	621,890	503,334
Mine and mill stockpiles (current portion)	10,523	120,235	231,865
Finished goods (concentrate)	5,322	184,891	49,548
Total	686,487	927,016	784,747
Allowance for material and supplies inventory obsolescence	(23,488)	(22,716)	(26,732)
Inventories, net	662,999	904,300	758,015

As of December 31, 2019, inventories have not been pledged as collateral. Additionally, as of December 31, 2019, the Company's property, plant and equipment and inventories are covered against certain risks under insurance policies maintained by FCX (see Note 19 for further discussion of the Company's insurance program). The Company's management is of the opinion that the insurance coverage is adequate to cover reasonably possible losses that may arise from such risks.

The changes in the allowance for material and supplies inventory obsolescence follow:

	Years Ended December 31,		
	2019	2018	2017
Balance at beginning of year	22,716	26,732	27,467
Additional provision	4,500	—	11,250
Write-off/adjustment	(3,728)	(4,016)	(11,985)
Balance at end of year	23,488	22,716	26,732

Based on review of the net realizable value of inventories, management believes that the allowance for obsolescence is adequate to cover the reasonably possible losses on obsolete inventories.

The Company did not have any long-term inventories as of December 31, 2019 and 2018. Long-term inventories totaled US$20.9 million as of December 31, 2017.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

7. INVESTMENTS IN ASSOCIATED COMPANIES

PT Smelting

PT Smelting, an Indonesia company, operates a copper smelter and refinery in Gresik, Indonesia. The Company owns 25 percent of the outstanding PT Smelting common stock. The Company accounts for its investment in PT Smelting under the equity method.

A summary of changes in the investment in PT Smelting follows:

	Years Ended December 31,		
	2019	**2018**	**2017**
Balance at beginning of year	124,647	61,121	82,806
Company's share of net earnings	12,504	7,288	9,961
Amortization of excess investment	(241)	(241)	(241)
Dividends	(40,098)	—	(2,692)
Intercompany profit (deferred) recognized (Notes 5 and 23)[a]	(17,310)	56,479	(28,713)
Balance at end of year	79,502	124,647	61,121

a. The Company defers intercompany profits on 25 percent of its sales to PT Smelting until the final sale by PT Smelting to third parties has occurred.

AVCO

AVCO, an Indonesia company, operates the Timika airport in the Papua province of Indonesia. The Company owns 25 percent of the outstanding AVCO common stock and accounts for its investment under the cost method. The Company's investment in AVCO totaled less than US$0.1 million as of December 31, 2019, 2018 and 2017.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

8. PROPERTY, PLANT AND EQUIPMENT, NET

Depreciation additions reflected in the following tables were recorded in cost of sales and subjected to inventory impacts accordingly. Construction in progress represents projects that have not been completed as of the consolidated statement of financial position date.

Property, plant and equipment, including assets under finance leases, for the year ended December 31, 2019, follow:

	Year Ended December 31, 2019			
	Beginning Balance	Additions	Transfers, Retirements And Other	Ending Balance
OWNED ASSETS				
Cost				
Buildings, facilities and related assets	2,677,437	23,477	103,363	2,804,277
Machinery and equipment	2,871,283	19,098	106,673	2,997,054
Mobile equipment	1,372,164	22,530	(18,545)	1,376,149
Construction in progress	2,416,214	1,219,553	(339,806)	3,295,961
Mineral reserves	3,056,118	—	1,867	3,057,985
Asset retirement costs	1,226,699	92,725	—	1,319,424
Total	13,619,915	1,377,383	(146,448)	14,850,850
Accumulated Depreciation				
Buildings, facilities and related assets	911,817	25,126	(93)	936,850
Machinery and equipment	1,575,613	87,761	(542)	1,662,832
Mobile equipment	1,045,309	90,135	(49,059)	1,086,385
Mineral reserves	—	55,380	—	55,380
Asset retirement costs	1,024,680	3,000	—	1,027,680
Total	4,557,419	261,402	(49,694)	4,769,127
ASSETS UNDER FINANCE LEASES				
Cost				
Buildings, facilities and related assets	124,711	2,054	—	126,765
Machinery and equipment	327,187	106	(537)	326,756
Mobile equipment	360	2,666	(325)	2,701
Total	452,258	4,826	(862)	456,222
Accumulated Depreciation				
Buildings, facilities and related assets	75,023	2,477	—	77,500
Machinery and equipment	220,741	1,593	(434)	221,900
Mobile equipment	35	1,177	—	1,212
Total	295,799	5,247	(434)	300,612
Net book value	9,218,955			10,237,333

(Amounts in tables in thousand United States dollars, unless otherwise stated)

8. PROPERTY, PLANT AND EQUIPMENT, NET (continued)

Property, plant and equipment, including assets under finance leases, for the year ended December 31, 2018, follow:

	Year Ended December 31, 2018			
	Beginning Balance	Additions	Transfers, Retirements And Other	Ending Balance
OWNED ASSETS				
Cost				
Buildings, facilities and related assets	2,315,716	12,223	349,498 [a]	2,677,437
Machinery and equipment	2,415,560	41,861	413,862 [a]	2,871,283
Mobile equipment	1,357,859	11,528	2,777 [a]	1,372,164
Construction in progress	2,685,317	830,949	(1,100,052) [a,b]	2,416,214
Mineral reserves	—	—	3,056,118 [a]	3,056,118
Asset retirement costs	1,206,893	15,705	4,101	1,226,699
Total	9,981,345	912,266	2,726,304	13,619,915
Accumulated Depreciation				
Buildings, facilities and related assets	870,793	41,146	(122)	911,817
Machinery and equipment	1,495,339	84,926	(4,652)	1,575,613
Mobile equipment	1,019,744	82,542	(56,977)	1,045,309
Asset retirement costs	706,632	318,048	—	1,024,680
Total	4,092,508	526,662	(61,751)	4,557,419
ASSETS UNDER FINANCE LEASES				
Cost				
Buildings, facilities and related assets	112,735	—	11,976	124,711
Machinery and equipment	293,310	—	33,877	327,187
Mobile equipment	35	—	325	360
Total	406,080	—	46,178	452,258
Accumulated Depreciation				
Buildings, facilities and related assets	73,303	1,720	—	75,023
Machinery and equipment	218,435	2,367	(61)	220,741
Mobile equipment	35	—	—	35
Total	291,773	4,087	(61)	295,799
Net book value	6,003,144			9,218,955

a. Includes additions of US$259.9 million in buildings, facilities and related assets, US$212.6 million in machinery and equipment, US$45.7 million in mobile equipment, US$431.3 million in construction in progress and US$3.1 billion in mineral reserves resulting from the acquisition of PTRTI (see Note 1b).

b. Includes a reduction of US$62.3 million to write-off certain previously capitalized project development costs for the new smelter in Indonesia following a decision to change the process technology (Note 23).

(Amounts in tables in thousand United States dollars, unless otherwise stated)

8. PROPERTY, PLANT AND EQUIPMENT, NET (continued)

Property, plant and equipment, including assets under finance leases, for the year ended December 31, 2017, follow:

	Year Ended December 31, 2017			
	Beginning Balance	Additions	Transfers, Retirements And Other	Ending Balance
OWNED ASSETS				
Cost				
Buildings, facilities and related assets	2,268,878	23,307	23,531	2,315,716
Machinery and equipment	2,300,441	9,895	105,224	2,415,560
Mobile equipment	1,366,261	23,486	(31,888)	1,357,859
Construction in progress	2,569,151	667,790	(551,624)	2,685,317
Asset retirement costs	1,198,342	8,551	—	1,206,893
Total	9,703,073	733,029	(454,757)	9,981,345
Accumulated Depreciation				
Buildings, facilities and related assets	854,595	39,173	(22,975)	870,793
Machinery and equipment	1,408,858	87,325	(844)	1,495,339
Mobile equipment	975,859	88,234	(44,349)	1,019,744
Asset retirement costs	340,701	365,931	—	706,632
Total	3,580,013	580,663	(68,168)	4,092,508
ASSETS UNDER FINANCE LEASES				
Cost				
Buildings, facilities and related assets	117,514	—	(4,779)	112,735
Machinery and equipment	300,002	—	(6,692)	293,310
Mobile equipment	35	—	—	35
Total	417,551	—	(11,471)	406,080
Accumulated Depreciation				
Buildings, facilities and related assets	74,515	1,974	(3,186)	73,303
Machinery and equipment	222,364	2,327	(6,256)	218,435
Mobile equipment	35	—	—	35
Total	296,914	4,301	(9,442)	291,773
Net book value	6,243,697			6,003,144

(Amounts in tables in thousand United States dollars, unless otherwise stated)

8. PROPERTY, PLANT AND EQUIPMENT, NET (continued)

The components of construction in progress as of December 31, 2019, follow:

	Accumulated Costs
Construction in progress:	
Grasberg Block Cave	1,392,340
Deep Mill Level Zone	1,061,465
Common Infrastructure	5,367
Other	836,789
Total	3,295,961

Borrowing costs attributed to qualifying assets and added to construction in progress totaled US$27.4 million in 2019, US$1.9 million in 2018 and US$3.4 million in 2017.

See Note 19 for a discussion of the Company's insurance coverage.

Net non-cash impacts to property, plant and equipment include additions of US$124.3 million in 2019 and US$37.2 million in 2018, and reductions of US$9.9 million in 2017 (primarily related to asset retirement costs, see Note 17). The year 2018 also includes the write-off of certain previously capitalized project development costs for the new smelter in Indonesia totaling US$62.3 million.

9. EXPLORATION AND EVALUATION ASSETS, AND MINE PROPERTIES, NET

Exploration and evaluation assets for the years ended December 31, 2019, 2018 and 2017, follow:

Cost		
As of December 31, 2016	96,665	
Additions	1,017	
As of December 31, 2017	97,682	
Additions	520	
Impairment	(98,202)	a
As of December 31, 2018 and 2019	—	b

a. The Company's IUPK does not include the area of interest related to these costs; therefore, the full amount was impaired in 2018.

b. There is no movement during 2019.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

9. EXPLORATION AND EVALUATION ASSETS, AND MINE PROPERTIES, NET (continued)

Mine properties for the years ended December 31, 2019, 2018 and 2017, follow:

	Developed and Producing Mines	Under Development	Undeveloped	Total
Cost				
As of December 31, 2016	1,536,128	915,545	20,655	2,472,328
Additions	2,050	21,723	—	23,773
Transfers, retirements and other	44,252	335,536	—	379,788
As of December 31, 2017	1,582,430	1,272,804	20,655	2,875,889
Additions	4,647	38,651	—	43,298
Transfers, retirements and other[a]	74,988	1,631,703	6,412	1,713,103
As of December 31, 2018	1,662,065	2,943,158	27,067	4,632,290
Additions	1,383	18,800	—	20,183
Transfers, retirements and other	(374,196)	(41,128)	—	(415,324)
As of December 31, 2019	1,289,252	2,920,830	27,067	4,237,149
Accumulated Amortization				
As of December 31, 2016	951,778	2,167	—	953,945
Charge for the year (Note 23)	42,651	1,722	—	44,373
Transfers, retirements and other	(361)	361	—	—
As of December 31, 2017	994,068	4,250	—	998,318
Charge for the year (Note 23)	40,833	2,912	—	43,745
Transfers, retirements and other	(567)	—	—	(567)
As of December 31, 2018	1,034,334	7,162	—	1,041,496
Charge for the year (Note 23)	39,799	19,413	—	59,212
Transfers, retirements and other	(503,367)	(4,687)	—	(508,054)
As of December 31, 2019	570,766	21,888	—	592,654
Net book value as of December 31, 2017	588,362	1,268,554	20,655	1,877,571
Net book value as of December 31, 2018	627,731	2,935,996	27,067	3,590,794
Net book value as of December 31, 2019	718,486	2,898,942	27,067	3,644,495

a. Includes additions of US$76.4 million in developed and producing mines, US$475.8 million in under development and US$6.4 million in undeveloped resulting from the acquisition of PTRTI (see Note 1b) .

Amortization charges reflected above were recorded in cost of sales and subjected to inventory impacts accordingly.

Amortization charges from Grasberg Block Cave and DMLZ are aligned with the pre-commercial production stage (Note 1a). Both mines will be moved into "Developed and producing mines" when the mine is substantially complete and meets the production start date criteria.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

9. EXPLORATION AND EVALUATION ASSETS, AND MINE PROPERTIES, NET (continued)

The details of the Company's mine properties' net book value are as follows:

Ore Body at December 31, 2019	
Developed and producing mines:	
Big Gossan	396,258
Deep Ore Zone	106,451
Concentrating mill and other infrastructure development	81,664
Under development:	
Grasberg Block Cave	1,923,905
Deep Mill Level Zone	996,446
Underground Common Infrastructure	112,711
Undeveloped:	
Kucing Liar	27,060
Total	3,644,495

See Note 19 for a discussion of the Company's insurance coverage.

10. LONG-TERM NOTES AND ACCOUNTS RECEIVABLE

Long-term notes and accounts receivable consist of the following:

	December 31,		
	2019	2018	2017
Third parties:			
Disputed tax assessments (Note 15e)	178,238	493,300	417,023
Income tax overpayments (Note 15c)	88,179	—	—
Claim for corporate income tax refund	11,756	23,511	—
Rio Tinto's share of AROs	— [a]	— [a]	67,804
Employee and contractor loans	18,624	18,487	17,814
Advances to contract service providers	24,154	22,847	26,638
Other	296	202	270
Total for third parties	321,247	558,347	529,549
Related parties (IAC – aircraft loans)	4,237	4,538	4,827
Total	325,484	562,885	534,376

a. See Note 1b for the discussion of the acquisition of PTRTI.

11. TRADE PAYABLES

Trade payables are primarily composed of amounts due to vendors who provide materials and supplies and/ or contract services in support of the Company's operations.

Trade payables consist of the following:

	December 31,		
	2019	2018	2017
Third parties	272,302	302,568	214,023
Related parties (AVCO)	4,829	4,225	6,669
Total	277,131	306,793	220,692

(Amounts in tables in thousand United States dollars, unless otherwise stated)

11. TRADE PAYABLES (continued)

The aging analysis of trade payables is as follows:

	December 31,		
	2019	2018	2017
0 – 30 days	241,073	240,514	190,494
31 – 60 days	24,087	33,376	16,543
> 60 days	11,971	32,903	13,655
Total	277,131	306,793	220,692

As of December 31, 2019, trade payables are non-interest-bearing and have normal settlement terms.

12. ACCRUED LIABILITIES

Accrued liabilities consist of the following:

	December 31,		
	2019	2018	2017
Third parties:			
Contract services and other accruals	282,447	104,501	92,972
Salaries, wages, employee benefits and other compensation	49,299	64,773	49,829
Provision for withholding taxes (Notes 19 and 23)	48,059	61,499	—
Prior period permit fees (Notes 17 and 23)	33,296	31,924	—
Community development commitments (Note 19)	1,980	3,219	3,980
Surface water tax assessments (Notes 19 and 23)	—	69,401	—
Rio Tinto's net share of former joint venture cash flows	— [a]	— [a]	29,900
Total for third parties	415,081	335,317	176,681
Related parties (Note 5):			
FMS	84,036	80,519	85,484
Puncakjaya Power	3,261	14,727	3,996
PT Eksplorasi Nusa Jaya	2,507	2,182	1,827
International Purveyors Inc.	1,137	1,670	1,433
AVCO	913	1,054	474
FCX	894	2,014	3,477
Total for related parties	92,748	102,166	96,691
Total	507,829	437,483	273,372

a. See Note 1b for discussion of the acquisition of PTRTI.

As of December 31, 2019, accrued liabilities are non-interest-bearing and have normal settlement terms.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

13. UNEARNED CUSTOMER RECEIPTS

Unearned customer receipts, which represent payables to customers as a result of adjusting embedded derivatives in provisionally priced sales to market prices at the reporting date and prepayments from customers, consist of the following:

	December 31,		
	2019	2018	2017
Trafigura Asia Trading Pte Ltd	1,256	657	—
Cliveden Trading AG	505	484	—
Transamine Trading S.A.	298	—	57,487
Freepoint Metals & Concentrates LLC	214	1,078	20,638
Gerald Metals S.A.	138	470	—
Concord Resources Limited	—	396	—
Total	2,411	3,085	78,125

14. LONG-TERM DEBT

The components of long-term debt (related party) follow:

	December 31,		
	2019	2018	2017
FCX revolving credit note (related party)	972,500	76,000	—

Revolving Credit Note (Related Party)
On December 21, 2018, the Company entered into an amended and restated unsecured US$2.0 billion revolving credit note with FCX. Loans shall be payable either on a stated maturity date or on demand as shall be agreed to between FCX and the Company at the time of each loan. The revolving credit note bears interest at a rate equal to the London Interbank Offered Rate (LIBOR) plus a spread to be determined by reference to the Company's credit ratings or, if not available, FCX's credit ratings (the Rate). Any loan that is not paid when due shall bear interest at a rate per annum equal to the Rate agreed above plus two percent, not to exceed the maximum rate permitted by law.

The average interest rate in connection with the revolving credit note with FCX was 4.2 percent in 2019, 4.3 percent in 2018 and 3.3 percent in 2017.

Revolving Credit Facility

In April 2018, FCX, the Company and Freeport-McMoRan Oil & Gas LLC (FM O&G LLC, a wholly owned subsidiary of FCX) entered into a US$3.5 billion, five-year unsecured revolving credit facility, which replaced FCX's prior revolving credit facility, with US$500 million available to the Company.

In May 2019, FCX, the Company and FM O&G LLC amended the $3.5 billion, five-year, unsecured revolving credit facility to extend $3.26 billion of the facility by one year to April 20, 2024, with the remaining $240 million maturing on April 20, 2023.

In November 2019, the revolving credit facility was amended to allow flexibility during ongoing transition to underground mining at Grasberg. The November 2019 amendment modified (i) the total leverage ratio from 3.75x to 5.25x through June 30, 2021, and (ii) the calculation of the total debt component used to determine the total leverage ratio by adjusting the amount of unrestricted cash that may be applied to reduce the amount of total debt from $2.5 billion to $1.25 billion through June 30, 2021.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

14. LONG-TERM DEBT (continued)

At December 31, 2019, there were no borrowings outstanding and US$12.6 million of letters of credit issued under the revolving credit facility, and the Company had US$500.0 million available to it.

Interest on loans made under the new revolving credit facility is, at the option of FCX, determined based on the adjusted LIBOR or an alternate base rate (each as defined in the revolving credit facility) plus a spread to be determined by reference to FCX's credit ratings.

15. TAXATION

a. Prepaid Taxes

Prepaid taxes consist of the following:

	December 31,		
	2019	2018	2017
VAT	207,432	103,260	147,976
Claims for corporate income tax refund	35,267	23,511	24,609
Other	12,780	12,796	6,105
Total	255,479	139,567	178,690

The claim for corporate income tax refund represents the current portion of outstanding income tax overpayments.

b. Taxes Payable

Taxes payable consist of the following:

	December 31,		
	2019	2018	2017
Income taxes:			
Corporate income taxes - Articles 29 (Note 15c)	160	114,645	365,447
Withholding taxes - Article 23 and 26	2,214	40,086	39,477
Employee taxes - Article 21	7,182	3,855	6,968
Other	9,041	9,001	9,338
Total	18,597	167,587	421,230

(Amounts in tables in thousand United States dollars, unless otherwise stated)

15. TAXATION (continued)

c. Income Tax Expense

The reconciliation between consolidated (loss) profit before income tax expense per the consolidated statement of profit or loss and other comprehensive income and the estimated taxable (loss) profit of the Company is as follows:

	Years Ended December 31,		
	2019	2018	2017
Consolidated (loss) profit before income tax expense	(4,988)	2,869,218	1,979,543
Less subsidiaries' (loss) profit before income tax expense	(64,459)	34,891	34,720
Profit before income tax expense-Company	59,471	2,834,327	1,944,823
Temporary differences:			
Depreciation and amortization	(115,224)	231,397	241,453
Prior period permit fees and surface water tax assessments	(21,159)	100,905	—
Exploration and evaluation assets	—	96,758	(1,902)
Deferred stripping costs	5,029	54,549	70,834
Amortization of parent company equity awards to employees	12,340	24,962	10,090
Provisions for accounting estimates	23,690	(31,141)	(151,711)
Development costs	(467,233)	(545,700)	(481,836)
Intercompany profit elimination	17,310	(56,479)	28,713
Capitalized interest	—	—	(3,355)
Infrastructure lease payments	—	—	(17,803)
Other	(3,961)	10,751	(4,392)
	(549,208)	(113,998)	(309,909)
Permanent differences:			
Non-deductible costs	8,067	35,561	19,920
Equity in PT Smelting earnings	(12,263)	(7,047)	(9,720)
Other	288,176 [a]	21,141	5,243
	283,980	49,655	15,443
Estimated taxable (loss) profit-Company	(205,757)	2,769,984	1,650,357
Current income tax (benefit) expense at statutory rate[b]	(51,440)	969,494	577,625
Reclass to deferred tax assets	51,440	—	—
Total current income tax expense	—	969,494	577,625
Less prepaid income taxes:			
Article 22	53,756	9,663	5,945
Article 25	34,323	850,782	206,525
Other	—	(5,029)	119
Corporate (estimated claim for tax refund) income tax payable:			
Company	(88,079)	114,078	365,036
Subsidiaries and other-net	60	567	411
Overpayments recorded in long-term notes and accounts receivable (Note 10)	88,179	—	—
Consolidated corporate income tax payable-net (Note 15b)	160	114,645	365,447

a. Includes non-deductible penalties and interest totaling US$219.3 million primarily associated with the agreement of a framework to resolve the mine development cost dispute (Note 15e).

b. Statutory rate was 25 percent for 2019 and 35 percent for 2018 and 2017.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

15. TAXATION (continued)

c. Income Tax Expense (continued)

The reconciliation between consolidated income tax expense per the consolidated statement of profit or loss and other comprehensive income and the theoretical tax amount on the Company's (loss) profit before income tax expense is as follows:

	Years Ended December 31,		
	2019	2018	2017
Consolidated (loss) profit before income tax expense	(4,988)	2,869,218	1,979,543
Income tax (benefit) expense calculated at statutory rate[a]	(1,247)	1,004,226	692,840
Company's equity in subsidiaries' profit before income tax reversal of intercompany consolidation eliminations	3,055	(28,906)	758
Tax effect on permanent differences:			
Equity in PT Smelting earnings	(3,066)	(2,466)	(3,402)
Non-deductible costs	73,697	20,466	6,972
Effect of rate reduction	13,317	(532,943)	—
Mine development cost dispute (Note 15e)	112,200 [b]	—	—
Other	5,030	(60,268)	(478)
Consolidated income tax expense	202,986	400,109	696,690
Current income tax expense - Company	—	969,494	577,625
Mine development cost dispute (Note 15e) and other related items	276,748	—	—
Adjustment to current income - Company	(6,448)	(49,576)	(6,401)
Adjusted current income tax expense - Company	270,300	919,918	571,224
Current income tax expense - Subsidiaries	3,055	3,392	3,246
Current income tax expense - Consolidated	273,355	923,310	574,470
Deferred income tax expense - Consolidated	(70,369)	(523,202)	122,220

a. Statutory rate was 25 percent for 2019 and 35 percent for 2018 and 2017.

b. Amount does not include indirect benefits of US$9.2 million recorded by the Company's subsidiaries.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

15. TAXATION (continued)

d. Deferred Income Taxes

The components of deferred income taxes follow:

	December 31, 2019	2018	2017
Company			
Deferred tax assets:			
Employee benefits	55,948	55,408	77,755
Reclamation costs	316,543	294,951	426,214
Tax loss carryforward	53,528	—	—
Other	72,126	47,544	25,420
Total deferred tax assets	498,145	397,903	529,389
Deferred tax liabilities:			
Property, plant and equipment	(2,804,299)	(2,764,106)	(2,318,144)
Deferred stripping costs	—	(1,273)	(20,875)
Other	(1,273)	(4,067)	(23,945)
Total deferred tax liabilities	(2,805,572)	(2,769,446)	(2,362,964)
Subsidiaries	(2,307,427)	(2,371,543)	(1,833,575)
Deferred tax assets:			
Employee benefits	398	447	467
Deferred tax liabilities			
Property, plant and equipment	(1,342)	(1,559)	(1,877)
Net deferred tax liabilities	(2,308,371)	(2,372,655)	(1,834,985)
Consolidated			
Deferred tax assets:			
Employee benefits	56,346	55,855	78,222
Reclamation costs	316,543	294,951	426,214
Tax loss carryforward	53,528	—	—
Other	72,126	47,544	25,420
Total deferred tax assets	498,543	398,350	529,856
Deferred tax liabilities:			
Property, plant and equipment	(2,805,641)	(2,765,665)	(2,320,021)
Deferred mining cots	—	(1,273)	(20,875)
Other	(1,273)	(4,067)	(23,945)
Total deferred tax liabilities	(2,806,914)	(2,771,005)	(2,364,841)
Net deferred tax liabilities	(2,308,371)	(2,372,655)	(1,834,985)

(Amounts in tables in thousand United States dollars, unless otherwise stated)

15. TAXATION (continued)

e. General

The Company has received assessments from the Indonesia tax authorities for additional taxes and interest related to various audit exceptions for income taxes and other taxes. The Company has filed objections to the assessments because it believes it has properly determined and paid its taxes. Excluding surface water tax and withholding tax assessments discussed below and the GOI's previous imposition of a 7.5 percent export duty that the Company paid under protest during the period April 2017 to December 21, 2018 (see Note 19), a summary of these assessments follows:

Tax Year	Tax Assessment	Interest Assessment	Total
2005	73,313	35,190	108,503
2007	47,998	23,039	71,037
2008	24,386	23,185	47,571
2010	2,923	1,403	4,326
2011	27,933	7,148	35,081
2012	123,642	279	123,921
2013	154,008	73,894	227,902
2014	138,677	6,338	145,015
2015	158,730	—	158,730
2016	257,378	113,249	370,627
	1,008,988	283,725	1,292,713

As of December 31, 2019, the Company had paid US$178.2 million (included in long-term notes and accounts receivables in the consolidated statement of financial position) (Note 10) on disputed tax assessments, which it believes is collectible.

In 2018, the Company received unfavorable Indonesia Tax Court decisions with respect to its appeal of capitalized mine development costs on its 2012 and 2014 corporate income tax returns. The Company appealed those decisions to the Indonesia Supreme Court. On October 31, 2019, the Indonesia Supreme Court communicated an unfavorable ruling regarding the treatment of mine development costs on the Company's 2014 tax return. During the fourth quarter of 2019, the Company met with the Indonesia Tax Office and developed a framework for resolution of the disputed matters. On December 30, 2019, the Company made a payment of US$250 million based on its understanding of the framework for resolution of disputes arising from the audits of the tax years 2012 through 2016, as well as tax years 2017 (for which a tax audit is not complete) and 2018 (for which a tax audit has not begun). Additional administrative steps will need to be completed by both the Company and the Indonesia Tax Office in order to implement the resolution.

In conjunction with the framework for resolution above, the Company recorded total net charges of US$304.1 million, including US$122.7 million for non-deductible penalties recorded to other expense, US$78.4 million for non-deductible interest recorded to interest expense and US$103.0 million to income tax expense, primarily for the impact of a reduction in the statutory rate on the Company's deferred tax assets.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

16. PROVISION FOR EMPLOYEE BENEFITS

Provision for employee benefits consists of the following:

	December 31,		
	2019	**2018**	**2017**
Net defined pension benefits liability	13,732	12,802	13,947
Deferred compensation and other postretirement benefits	4,057	4,158	4,252
Incentive compensation	1,864	1,544	2,342
Total	19,653	18,504	20,541

Pension Plans

The Company has a defined benefit pension plan denominated in Rupiah covering substantially all of its Indonesia employees. The Company funds the plan and invests the assets through a separate Indonesia legal entity, Dana Pensiun Freeport Indonesia (DPFI) (Note 5), in accordance with Indonesia pension regulations. DPFI holds the assets for the Company's plan, as well as assets for plans sponsored by PT Eksplorasi Nusa Jaya (related party) and PT Kuala Pelabuhan Indonesia.

The pension obligation was valued at an exchange rate of 13,832 Rupiah to one US$ on December 31, 2019, 14,409 Rupiah to one US$ on December 31, 2018, and 13,480 Rupiah to one US$ on December 31, 2017. The Company's expected rate of return on plan assets is evaluated at least annually, taking into consideration its historical yield and the long-range estimated return for the plan assets. Based on these factors, the Company expects its pension assets will earn an average of 7.75 percent per annum beginning January 1, 2020. The discount rate assumption for the Company's plan is based on the Mercer Indonesian zero coupon bond yield curve derived from the Indonesia Government Security Yield Curve. Changes in the discount rate are reflected in the Company's benefit obligation and, therefore, in future pension costs.

The Company's pension obligations were based on management's assessment and the actuarial report of Kantor Konsultan Aktuaria I Gde Eka Samarja, FSAI, an independent actuary, dated January 29, 2020, for the pension obligation as of December 31, 2019; and the actuarial reports of PT Mercer Indonesia, an independent actuary, dated January 21, 2019, and January 30, 2018, for the pension obligation as of December 31, 2018 and 2017, respectively. The Company's pension obligation was calculated using the projected-unit-credit method with the following principal assumptions:

	December 31,		
	2019	**2018**	**2017**
Weighted-average assumptions used to determine benefit obligations:			
Discount rate	7.25%	8.25%	6.75%
Rate of compensation increase[a]	4.00%	4.00%	4.00%
Weighted-average assumptions used to determine periodic benefit cost for the year:			
Discount rate	8.25%	6.75%	8.25%
Rate of compensation increase[a]	4.00%	4.00%	8.00%

a. The rate of compensation increase shown relates to staff employees and non-staff employees.

The Company's pension benefit obligation includes employee service entitlements in accordance with Indonesian Labor Law No. 13/2003, which requires that companies provide a minimum level of benefits to employees upon employment termination based on the reason for termination and the employee's years of service.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

16. PROVISION FOR EMPLOYEE BENEFITS (continued)

Pension Plans (continued)

A summary of the components of the Company's pension benefit obligation follows:

	December 31,		
	2019	**2018**	**2017**
Change in benefit obligation:			
Benefit obligation at beginning of year	221,480	241,946	376,087
Service cost	12,295	13,282	20,170
Interest cost	16,811	13,978	23,047
Benefits paid, including settlements	(13,438)	(12,225)	(51,873)
Net settlement (loss) gain	4	—	(61,375)
Remeasurements	(27,080)	(19,655)	(61,866)
Foreign exchange losses (gains)	9,036	(15,846)	(2,245)
Benefit obligation at end of year	219,108	221,480	241,945
Change in plan assets:			
Fair value of plan assets at beginning of year	237,996	268,880	284,276
Interest income	18,274	16,269	21,245
Employer contributions	71	3,990	27,645
Benefits paid	(13,127)	(12,225)	(18,564)
Remeasurements	1,325	(21,452)	(10,457)
Foreign exchange gains (losses)	10,045	(17,466)	(35,265)
Fair value of plan assets at end of year	254,584	237,996	268,880
Funded status	(35,476)	(16,516)	(26,935)
Effect of asset ceiling	49,208	29,318	40,882
Net defined pension benefits liability	13,732	12,802	13,947

To calculate its pension benefit obligation, the Company used 150 percent of the 2011 Indonesian Mortality Table for the years ended December 31, 2019, 2018 and 2017.

The components of the net periodic benefit cost (income) for the Company's plan follow:

	Years Ended December 31,		
	2019	**2018**	**2017**
Service cost	12,295	13,282	20,170
Interest cost	1,013	333	3,490
Net settlement loss (gain)	4	—	(61,375)
Net periodic benefit cost (income)	13,312	13,615	(37,715)

(Amounts in tables in thousand United States dollars, unless otherwise stated)

16. PROVISION FOR EMPLOYEE BENEFITS (continued)

Pension Plans (continued)

DPFI's weighted-average asset allocation for its plan assets, which comply with DPFI's investment guidelines, follows (in percentages):

	December 31,		
	2019	2018	2017
Unquoted investments:			
Bank time deposits	27%	33%	33%
Investments quoted in active markets:			
Equity securities	38	38	36
Debt securities	35	29	31
Total	100%	100%	100%

As of December 31, 2019, the expected benefit payments for the Company's pension plan (based on a December 31, 2019, exchange rate of 13,832 Rupiah to one US$) total US$11.7 million in 2020, US$19.5 million in 2021, US$21.7 million in 2022, US$29.9 million in 2023, US$32.3 million in 2024 and US$157.0 million for 2025 through 2029.

As of December 31, 2019, if the discount rate increased/decreased by 25 basis points, with all other variables held constant, the pension benefit obligation would change by approximately US$3.6 million.

Restructuring Charges

As a result of the first quarter of 2017 regulatory restrictions and uncertainties regarding long-term investment stability, the Company took actions to adjust its cost structure, reduce its workforce and slow investments in its underground development projects and new smelter. These actions included workforce reductions through furlough and voluntary retirement programs. Following the furlough and voluntary retirement programs, a significant number of employees and contractors elected to participate in an illegal strike action beginning in May 2017, and were subsequently deemed to have voluntarily resigned under existing Indonesia laws and regulations. As a result, the Company recorded charges in 2017 to production costs of US$115.0 million, and to selling, general and administrative costs of US$6.1 million for employee severance and related costs, and a pension settlement gain of US$61.4 million included in production costs. In 2018, the Company recorded additional charges of US$4.7 million to production cost (Note 23).

17. ASSET RETIREMENT OBLIGATIONS

The ultimate nature and amount of ARO costs to be incurred at the Company's mining operations will be determined based on applicable laws and regulations and the Company's assessment of appropriate remedial activities in the circumstances, after consultation with governmental authorities, affected local residents and other affected parties, and cannot currently be projected with precision. Estimates of the ultimate reclamation and closure costs the Company will incur in the future involve complex issues requiring integrated assessments over a period of many years and are subject to revision over time as more complete studies are performed and, based on updated data and assumptions, improved ARO estimates are utilized. Some interim closure and reclamation costs will be incurred during mining activities, while final closure costs and the remaining reclamation costs will be incurred at the cessation of all mining activities, which are currently estimated to continue through 2041.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

17. ASSET RETIREMENT OBLIGATIONS (continued)

The Company estimated its AROs using an expected cash flow approach. To calculate the fair value of these obligations, the Company applied an estimated long-term inflation rate and discounted the projected cash flows at the Company's estimated risk-free interest rates. After discounting the projected cash flows, a market risk premium of 10 percent was applied to the total to reflect what a third party might require to assume these AROs. The market risk premium was based on market-based estimates of rates that a third party would have to pay to insure its exposure to possible future increases in the value of these obligations. The Company estimated these aggregate undiscounted obligations, including those before 2042, to be US $1.3 billion at December 31, 2019, US$1.4 billion at December 31, 2018 and US$1.5 billion at December 31, 2017.

Changes in the Company's aggregate discounted AROs for the Grasberg mineral district follow:

	December 31,		
	2019	**2018**	**2017**
Balance at beginning of year	1,239,867	1,292,480	1,309,456
Revisions to cash flow estimates, liabilities incurred and discount rates	112,446	15,705	5,914
Accretion expense	24,206	22,433	24,962
Payments	(91,955)	(75,626)	(39,877)
Settlements	(18,391)	(15,125)	(7,975)
Balance at end of year	1,266,173	1,239,867	1,292,480
Less current portion	(227,250)	(196,399)	(123,182)
Long-term portion	1,038,923	1,043,468	1,169,298

As of December 31, 2019, the Company's total AROs included US$541.3 million for mine closure activities, US$58.2 million for mine reclamation activities and US$666.7 million for other remediation activities.

Mine closure activities are those activities that the Company intends to perform in order to permanently and properly shut down and close mining operations. In December 2010, the GOI issued a regulation regarding mine reclamation and closure, which requires a company to provide a mine closure guarantee in the form of a time deposit placed in a state-owned bank in Indonesia. In December 2018, the Company, in conjunction with the issuance of the IUPK, submitted a revised mine closure plan to reflect the extension of operations to 2041. Mine reclamation activities are those activities that occur during the life of mining operations that the Company performs to comply with Indonesia mining law and reclamation plans filed with the Ministry of Energy and Mineral Resource. At December 31, 2019, the Company funded US$91.8 million into a restricted time deposit account for mine closure guarantees and US$7.7 million for reclamation guarantees.

Other remediation activities are those activities, primarily restoration and remediation of overburden stockpiles, that fulfill the Company's overall mine closure and reclamation obligations and commitments.

In October 2017, Indonesia's Ministry of Environment and Forestry (the Ministry) notified the Company of administrative sanctions related to certain activities the Ministry indicated are not reflected in its environmental permit. The Ministry also notified the Company that certain operational activities were inconsistent with factors set forth in its environmental permitting studies and that additional monitoring and improvements need to be undertaken related to air quality, water drainage, treatment and handling of certain wastes, and tailings management. In December 2018, the Ministry issued a revised environmental permit to the Company to address many of the operational activities that it alleged were inconsistent with earlier studies. The remaining administrative sanctions are being resolved through adoption of revised practices and, in a few situations, the Company has agreed with the Ministry on an appropriate multi-year work plan, including the closure of an overburden stockpile. In addition, the Company continues to work with the Ministry to finalize environmental permitting related to the rail facilities and certain of the underground mining production operations as well as permitting for the extension of levees to contain the lateral flow of tailings in the lowlands.

17. ASSET RETIREMENT OBLIGATIONS (continued)

In December 2018, the Company and the Ministry also established a new framework for continuous improvement in environmental practices in the Company's operations, including initiatives that it will pursue to increase tailings retention and to evaluate large-scale beneficial uses of tailings within Indonesia. The Ministry issued a new decree that incorporates various initiatives and studies to be completed by the Company that would target continuous improvement in a manner that would not impose new technical risks or significant long-term costs to its operations. The new framework enables the Company to maintain compliance with site-specific standards and provides for ongoing monitoring by the Ministry. In 2018, the Company recorded a US$31.8 million (Rp460.0 billion) charge for the Ministry assessments of prior period permit fees.

18. OTHER NON-CURRENT LIABILITIES

Other non-current liabilities primarily consist of VAT and withholding tax reserves, surface water tax settlement (Note 19) and contract services obligations.

19. COMMITMENTS AND CONTINGENCIES

Environmental

The Company has an environmental policy committing it not only to compliance with central, provincial and local environmental statutes and regulations, but also to continuous improvement of its environmental performance at every operational site. The Company believes that its operations are being conducted pursuant to applicable permits and are in compliance in all material respects with applicable environmental laws, rules and regulations.

Social and Economic Development Programs

The Company has a Social, Employment, and Human Rights Policy to ensure that its operations are conducted in a manner that respects basic human rights, the laws and regulations of the host country and the culture of the people who are indigenous to the areas in which it operates. In 1996, the Company established the Freeport Partnership Fund for Community Development, which was previously called the Freeport Fund for Irian Jaya Development, through which the Company has made available funding and technical assistance to support community development initiatives in areas of health, education, economic development and local infrastructure of the area. The Company had committed through December 31, 2019, to provide one percent of its annual net revenue for the development of the local communities in its area of operations through the Freeport Partnership Fund for Community Development. Negotiations to extend this agreement are currently underway though the Company will continue its contributions to ensure there are no interruptions in the implementation of approved projects. The Company charged US$27.7 million in 2019, US$55.4 million in 2018 and US$44.4 million in 2017 to cost of sales for this commitment (Note 23).

Commitments and Operating Leases

The Company has aggregate commitments for capital expenditures and purchases of materials and supplies to be used in its operations in 2020 totaling US$297.5 million as of December 31, 2019. As of December 31, 2019, the Company's aggregate minimum annual contractual payments under noncancelable long-term financing leases are not material.

Restricted Cash

As of December 31, 2019, the Company had US$99.5 million of time deposits that were legally restricted in connection with (a) mine closure (US$91.8 million), and (b) the Company's required reclamation costs (US $7.7 million) for years 2007 through 2020 that have not yet been incurred.

19. COMMITMENTS AND CONTINGENCIES (continued)

Insurance

The Company has property damage and business interruption insurance coverage under insurance policies maintained by FCX. These insurance policies have specified deductible amounts or self-insured retentions and policy limits for each of FCX's mining operations and for the consolidated FCX mining business as a whole. In this regard, FCX has established coverage for the Company with a self-insured deductible of up to US$100 million per occurrence for combined property damage and business interruption risks with coverage of up to a maximum US$1 billion limit for all of FCX's mining operations. Certain sub-limits are imposed for losses resulting from specific risks, including underground operations as well as price caps on commodities for business interruption coverage determination. Management considers this to be an adequate insurance program to cover reasonably possible losses that may arise from such risks.

Disputed Export Duties

In April 2017, the Company entered into a memorandum of understanding with the GOI (the 2017 MOU) confirming that the former COW would continue to be valid and honored until replaced by a mutually agreed IUPK and investment stability agreement. In the 2017 MOU, the Company agreed to continue to pay export duties of 5.0 percent on the value of copper concentrate export sales until completion of the divestment and new IUPK. Subsequently, the Customs Office of the Minister of Finance refused to recognize the 5.0 percent export duty agreed to under the 2017 MOU and imposed a 7.5 percent export duty under the Ministry of Finance regulations, which the Company paid under protest during the period April 2017 to December 21, 2018. The Company paid US$154.9 million for this period, and appealed the disputed amounts to the Indonesia Tax Court. The Indonesia Tax Court subsequently announced rulings in favor of the Company related to the individual cases involving US$29.3 million of the disputed amounts, which were refunded by the Indonesia Customs Office to the Company.

The Indonesia Customs Office appealed the Indonesia Tax Court decisions on these cases to the Indonesia Supreme Court. On October 29, 2019, the Indonesia Supreme Court posted on its website rulings unfavorable to the Company for certain of the appealed cases involving approximately half of the US$29.3 million that had been refunded to the Company.

As a result of the October 2019 ruling, the Company recorded a charge of US$154.9 million during 2019 to fully reserve for this matter. The Company continues to believe that a five percent export duty was applicable during this period and is evaluating options to recover these overpayments.

Under the terms of the IUPK, the Company is subject to an export duty until smelter development reaches 50 percent, at which time the export duty will be eliminated (see Note 1a for export duty rates).

Surface Water Tax Assessments

The Company received assessments from the local regional tax authority in Papua, Indonesia, for additional taxes and penalties related to surface water taxes for the period from January 2011 through December 2018. As a result, the Company offered to pay one trillion Rupiah to settle these historical surface water tax disputes and charged US$69.1 million to production and delivery costs in December 2018. In May 2019, the Company agreed to a final settlement of 1.394 trillion Rupiah (approximately US$99 million) and recorded an incremental charge of US$27.7 million. The Company paid 708.5 billion Rupiah (US$50.2 million) in October 2019, and will pay the balance of 685.5 billion Rupiah (US$49.6 million based on the exchange rate at December 31, 2019, and is included in other non-current liabilities in the consolidated statement of financial position at December 31, 2019) in February 2021.

In accordance with its IUPK discussed in Note 1a, the Company is obligated to pay surface water taxes of US$15.0 million annually, which began in 2019.

19. COMMITMENTS AND CONTINGENCIES (continued)

Withholding Tax Matter

In January 2019, the Indonesia Supreme Court posted on its website an unfavorable decision related to the Company’s 2005 withholding tax matter. The Company had also received an unfavorable Indonesia Supreme Court decision in November 2017 and has other pending cases at the Indonesia Supreme Court related to withholding taxes for employees and other service providers for the year 2005 and the year 2007, which total approximately US$45.5 million (based on the exchange rate as of December 31, 2019, and is included in accrued liabilities in the consolidated statements of financial position at December 31, 2019), including penalties and interest. As a result of the January 2019 ruling, the Company concluded a loss on all outstanding withholding tax matters is probable under applicable accounting guidance, and it recorded a charge of US$61.5 million in 2018.

Smelter Commitment

In connection with a memorandum of understanding previously entered into with the GOI in July 2014, the Company provided an assurance bond at that time to support its commitment to construct a new smelter in Indonesia (US$129.0 million as of December 31, 2019). In connection with the extension of the Company's mining rights from 2031 to 2041, the Company committed to construct a new smelter in Indonesia by December 21, 2023. A site for the new smelter has been selected, and ground preparation is advancing. Engineering and front-end engineering and design for the selected process technology are advancing and expected to be completed in 2020. The preliminary capital cost estimate for the project approximates $3 billion, pending completion of final engineering. Estimated related capital expenditures for 2020 approximate $0.5 billion. The Company has advanced financing discussions with a syndicate of banks and expects the project will be funded by a bank loan. In March 2019, the Company funded US$36.0 million into an escrow account to secure a future land lease at the Java Integrated Industrial and Port Site, managed by PT Berkah Kawasan Manyar Sejahtera, associated with the new smelter. In December 2019, the Company paid US$7.3 million, taken from the escrow account, for one year of rent.

20. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES, AND FINANCIAL AND DERIVATIVE INSTRUMENTS

Risk Concentrations

Substantially all of the Company’s assets are located in Indonesia. Over the last several years, the Indonesia economy posted economic gains and reported reduced inflation rates. Indonesia continues to face political, economic and social uncertainties, including the potential of terrorist attacks and ethnic and religious strife, as well as a low-level separatist movement in Papua province.

Market Risk

The Company’s use of financial instruments to manage market risks is conducted by designated personnel in accordance with approved policies, with management oversight. The Company does not purchase, hold or sell derivative financial instruments unless there is an existing asset or obligation or it anticipates a future activity that is likely to occur and will result in exposure to market risks that the Company intends to offset or mitigate. The Company does not enter into any derivative instruments for speculative purposes, but has entered into derivative instruments in limited instances to achieve specific objectives. These objectives principally relate to managing commodity price risk. The fair values of the Company’s derivative instruments are based on widely published market closing prices. At December 31, 2019, 2018 and 2017, the Company’s only outstanding derivative instruments were its embedded derivatives (see following discussion).

20. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES, AND FINANCIAL AND DERIVATIVE INSTRUMENTS (continued)

Commodity Price Risk

The Company's concentrate sales contracts generally provide for provisional pricing at the time of shipment with final pricing determined in a future period based on market prices. These contract terms create embedded derivatives that must be bifurcated from the host contract and marked to fair value through earnings. Also, from time to time, the Company has entered into copper forward sales contracts to hedge the market risk associated with fluctuations in the prices of commodities it sells. Derivative instruments used by the Company to manage its risks do not contain credit risk-related contingent provisions. The Company had no price protection contracts relating to its mine production for any period presented in these consolidated financial statements.

Financial Credit Risk

The Company is exposed to credit loss when financial institutions with which it has entered into commodity contracts, such as copper forward contracts, are unable to pay. To minimize the risk of such losses, the Company uses counterparties that meet certain requirements and periodically reviews the creditworthiness of these counterparties. The Company does not anticipate that any of the counterparties it deals with will default on their obligations. The Company did not have any outstanding commodity contracts with financial institutions for any period presented in these consolidated financial statements and, therefore, did not have any credit exposure associated with commodity contracts.

The Company is also exposed to credit loss when its trade receivables become uncollectible. However, because the Company's sales contracts generally require a provisional payment of at least 90 percent of the invoice amount upon shipment, the risk of loss is minimal.

Liquidity Risk

Liquidity risk is defined as the risk that the short-term revenues are not enough to cover short-term expenditures.

The Company's liquidity requirements have arisen from the need to finance its operations. In the management of liquidity risk, the Company monitors and maintains a level of liquidity adequate to finance the Company's operations and to mitigate the effects of fluctuations in cash flows.

The current financial liabilities, including trade payables, accrued liabilities, unearned customer receipts and royalties payable, will mature in less than one year. Non-current financial liabilities will mature beyond one year.

Currency Exchange Risk

The Company conducts the majority of its operations in Indonesia where its functional currency is the US$. All of the Company's revenues and the majority of its costs and expenses are denominated in US$; however, some costs and certain assets and liabilities are denominated in Indonesian Rupiah, Australian dollars and other currencies. Generally, the Company's results are adversely affected when the US$ strengthens against these currencies and positively affected when the US$ weakens against these currencies because of the Company's current net position of Rupiah-denominated assets exceeding Rupiah-denominated liabilities.

20. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES, AND FINANCIAL AND DERIVATIVE INSTRUMENTS (continued)

Currency Exchange Risk (continued)

The Company recorded (losses) gains on foreign exchange totaling US$(11.5) million in 2019, US$3.6 million in 2018 and US$1.0 million in 2017 related to currency transactions, primarily related to revaluation of Rupiah-denominated assets and liabilities. At December 31, 2019, the Company's most significant Rupiah-denominated assets include cash and cash equivalents of US$2.8 million, VAT receivables of US $207.4 million, employee receivables of US$25.4 million and non-income tax receivables of US$22.9 million, partially offset by Rupiah-denominated payables and pension liabilities of US$129.9 million, all of which were recorded at an exchange rate of 13,832 Indonesian Rupiah to one US$.

If the Rupiah exchange rate strengthened or weakened by 10 percent as compared to the exchange rate as of December 31, 2019, with other variables held constant, the Company's net monetary Rupiah-denominated assets would be higher by US$18.5 million or lower by US$15.1 million, respectively. There were no significant fluctuations of the Australian dollar against the US$.

Following is a summary of estimated annual payments and the impact of changes in foreign currency rates on the annual operating costs:

	Estimated Annual Payments		10% Change in exchange rate (in millions)[a]	
	in local currency	in millions[b]	Increase	Decrease
Rupiah	10.2 trillion	737	(67)	82
Australian dollar	199 million	139	(13)	15

a. Reflects the estimated impact on annual operating costs assuming a 10 percent increase or decrease in the exchange rate reported at December 31, 2019.

b. Based on December 31, 2019, exchange rates of 13,832 Rupiah to one US$ and 1.43 Australian dollars to one US$.

Embedded Derivatives

Certain of the Company's copper concentrate sales contracts provide for provisional pricing, primarily based on the LME copper price and the LBMA gold price at the time of shipment as specified in the contract. Sales with a provisional sales price contain an embedded derivative (*i.e.*, the price settlement mechanism that is settled after the time of delivery) that is required to be bifurcated from the host contract. The host contract is the sale of the metals contained in the concentrate at the then-current LME copper price or the LBMA gold price. The embedded derivative does not qualify for hedge accounting treatment and fair value fluctuations in the value of embedded derivatives are recorded in revenues.

A summary of aggregate embedded derivatives at December 31, 2019, follows:

		Average Price Per Unit (US$)		
	Open Positions	**Contract**	**Market**	**Maturities Through**
Embedded derivatives in concentrate sales contracts:				
Copper (millions of pounds)	125	2.69	2.80	March 2020
Gold (thousands of ounces)	112	1,471	1,527	February 2020

The embedded copper derivatives as of December 31, 2019, are expected to be finally priced over the first three months of 2020. A two-cent movement in the average copper price used for these derivatives will have an approximate US$1 million impact on the Company's 2020 total comprehensive income. As of December 31, 2018, the Company had embedded copper derivatives on 161 million pounds at an average market price of US$2.71 per pound. As of December 31, 2017, the Company had embedded copper derivatives on 351 million pounds at an average market price of US$3.28 per pound. The average market prices were based on then-current forward prices for the expected settlement dates.

20. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES, AND FINANCIAL AND DERIVATIVE INSTRUMENTS (continued)

Embedded Derivatives (continued)

The embedded gold derivatives as of December 31, 2019, are expected to be finally priced over the first two months of 2020. A US$25 movement in the average price used for these derivatives will have an approximate US$2 million impact on the Company's 2020 total comprehensive income. As of December 31, 2018, the Company had embedded gold derivatives on 119 thousand ounces at an average market price of US$1,286 per ounce. As of December 31, 2017, the Company had embedded gold derivatives on 318 thousand ounces at an average market price of US$1,300 per ounce.

The Company's embedded derivatives on provisional copper and gold sales are valued using quoted market prices based on the forward LME copper price and the adjusted LBMA gold forward price. Realized and unrealized gains (losses) recognized in revenues for embedded derivatives in concentrate sales contracts totaled US$30.2 million in 2019, US$(146.8) million in 2018 and US$255.5 million in 2017. The Company's outstanding embedded derivatives are recorded at fair value and are included in trade receivables and/or trade payables. Embedded derivatives were in a net asset position of US$20.2 million at December 31, 2019, a net liability position of US$5.9 million at December 31, 2018, and a net asset position of US$88.7 million at December 31, 2017.

Other Financial Instruments

Other financial instruments include: cash and cash equivalents, restricted cash, trade receivables, other receivables, long-term notes and accounts receivable, trade payables, accrued liabilities, unearned customer receipts and royalties payable. The financial statement amount for each of these items is a reasonable estimate of the fair value because of the short-term nature of these instruments and generally negligible credit losses.

Fair Value Measurement

Fair value accounting guidance includes a hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3).

Level 1: Quoted (unadjusted) prices in active markets for identical assets or liabilities;

Level 2: Other techniques for which all inputs that have a significant effect on the recorded fair value are observable, either directly or indirectly; and

Level 3: Techniques that use inputs that have a significant effect on the recorded fair value that are not based on observable market data.

The Company's embedded derivatives on provisional sales are valued using quoted monthly LME copper forward prices and the adjusted LBMA gold forward prices at each reporting date based on the month of maturity; however, the Company's contracts themselves are not traded on an exchange. As a result, these derivatives are classified within Level 2 of the fair value hierarchy.

The Company did not have any transfers between fair value levels during the reporting periods.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

21. SHARE CAPITAL

In 2018, the Company amended its articles of association to increase its authorized shares from 300,000 to 379,150. On December 21, 2018, the Company sold 78,172 shares to PT Inalum and 73,488 shares to PTI for a total of US$3.5 billion.

Shareholders and their ownership interests as of December 31, 2019 and 2018, were as follows:

	Number of Shares Issued and Fully Paid	Percentage of Ownership	US$ Amount
FCX	184,890	48.76%	18,489
PT Inalum	99,472	26.24	9,947
PTI	94,788	25.00	9,479
Total	379,150	100.00%	37,915

Shareholders and their ownership interests as of December 31, 2017, were as follows:

	Number of Shares Issued and Fully Paid	Percentage of Ownership	US$ Amount
FCX	184,890	81.28%	18,489
PT Inalum	21,300	9.36	2,130
PTI	21,300	9.36	2,130
Total	227,490	100.00%	22,749

As of December 31, 2019 and 2018, PT Inalum owned 100 percent of PTI, and, as of December 31, 2017, FCX owned 100 percent of PTI.

The Company's Board of Directors did not declare any dividends during 2019. The Company's Board of Directors declared and the Company paid total dividends of US$1.9 billion (US$8,465 per share) during 2018 and US$1.4 billion (US$6,340 per share) during 2017.

The Company's objectives when managing capital are to (i) maintain a strong capital base so as to maintain investor, creditor and market confidence, and (ii) to sustain future development of the business.

The Company regularly reviews and manages its capital structure to optimize the use and earnings potential of the Company's resources and provide returns for its shareholders. The Company takes into consideration the future capital requirements of the Company and projected profitability, operating cash flows, capital expenditures and strategic investment opportunities.

In order to maintain or adjust the Company's capital structure, it may adjust the amount of dividends paid to shareholders or adjust its operating strategy as market conditions change. Management regards total shareholders' equity as shown in the consolidated statement of financial position as capital, for capital management purposes.

No significant changes have been made in the objectives, policies and processes of the Company in 2019, 2018 and 2017.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

22. NET REVENUES

Consolidated net revenues attributable to the products the Company produced follow:

	Years Ended December 31,		
	2019	2018	2017
Copper in concentrate	1,819,934	3,366,546	2,753,646
Gold in concentrate	1,360,971	2,993,076	1,936,652
Silver in concentrate	39,191	57,939	48,901
Price participation	—	(11)	—
Adjustments to revenue:			
Treatment charges	(151,527)	(294,369)	(261,590)
Royalties			
Copper	(57,729)	(121,642)	(98,227)
Gold	(47,802)	(114,064)	(72,992)
Silver	(959)	(1,971)	(1,635)
Export duties (Notes 1a and 19)	(221,093) [a]	(180,222)	(115,223)
Revenue from contracts with customers	2,740,986	5,705,282	4,189,532
Embedded derivatives (Note 20)	30,227	(146,775)	255,511
Total consolidated net revenues	2,771,213	5,558,507	4,445,043

a. Includes charges totaling US$154.9 million associated with an unfavorable Indonesia Supreme Court ruling related to certain disputed export duties (see Note 19).

Net consolidated revenues from sales to third parties and related parties and the corresponding percentages to total consolidated net revenues follow:

	Years Ended December 31,					
	2019		2018		2017	
	Amount	%	Amount	%	Amount	%
Third-party sales[a]	819,258	30%	3,219,731	58%	2,422,215	54%
PT Smelting (Related party)	1,894,301	68	2,226,011	40	2,022,828	46
Atlantic Copper (Related party)	57,654	2	112,765	2	—	—
Total	2,771,213	100%	5,558,507	100%	4,445,043	100%

a. All of these were export sales, and no single customer accounted for 10 percent or more of sales.

Net consolidated revenues based on the geographical location of the customer follow:

	Years Ended December 31,		
	2019	2018	2017
Domestic:			
Indonesia	1,894,301	2,226,011	2,022,828
International:			
Switzerland	684,641	1,432,012	190,411
United States	103,734	169,578	128,817
Philippines	72,645	220,914	378,012
Spain	57,654	112,765	—
United Kingdom	20,734	22,138	—
Korea	12,497	119,224	147,329
China	(21,641) [a]	425,963	342,461
India	(22,790) [a]	315,510	576,969
Japan	(30,562) [a]	514,392	637,619
Singapore	—	—	20,597
Total	2,771,213	5,558,507	4,445,043

a. Includes charges that reduce revenues totaling US$154.9 million associated with an unfavorable Indonesia Supreme Court ruling related to certain disputed export duties for prior years (see Note 19).

(Amounts in tables in thousand United States dollars, unless otherwise stated)

23. COSTS AND EXPENSES

Cost of sales consists of the following:

	Years Ended December 31,		
	2019	2018	2017
Materials and supplies	460,160	383,802	397,347
Energy costs	445,182	485,596	386,445
Employee costs	404,558	337,834	445,587
Depreciation and amortization:			
Property, plant and equipment, including assets under finance leases (Note 8)	266,649	530,749	584,964
Mine properties (Note 9)	59,212	43,745	44,373
Contract and consulting services	318,231	344,744	270,541
Inventory impact	289,281	10,482	(35,410)
Delivery and handling costs	58,319	84,361	56,660
Freeport Partnership for Community Development (Note 19)	27,713	55,438	44,442
Surface water tax assessments for prior years (Notes 12 and 19)	27,682	69,112	—
Asset retirement cost	19,721	—	—
PT Smelting intercompany profit deferred (recognized)	17,310	(56,479)	28,713
Surface water tax per IUPK (Note 19)	15,000	—	—
Mill optimization studies	8,117	—	—
Deferred stripping costs	5,092	54,549	70,834
Write-off of previously capitalized smelter development costs	—	62,349	—
Provision for withholding taxes (Notes 12 and 19)	—	61,499	—
Prior period permit fees (Notes 12 and 17)	—	31,792	—
Restructuring charges (Note 16)	—	4,657	53,642
Other	26,188	361	1,575
Total cost of sales	2,448,415	2,504,591	2,349,713

Following are cost of sales associated with related parties (included above):

	Years Ended December 31,		
	2019	2018	2017
FCX, including FMS	43,843	53,120	65,918
Puncakjaya Power	49,358	36,486	37,615
International Purveyors Inc.	3,974	4,709	3,943
AVCO	5,902	3,442	3,860
PT Smelting intercompany profit deferred (recognized)	17,310	(56,479)	28,713
	120,387	41,278	140,049

General and administrative expenses consist of the following:

	Years Ended December 31,		
	2019	2018	2017
Employee costs	55,204	66,097	53,941
Professional fees and contract services	32,105	35,135	34,104
Rent	5,397	8,338	8,689
Restructuring charges (Note 16)	—	151	6,071
Other (reduced by former joint venture partner contributions)	28,142	11,424	20,836
Total general and administrative expenses	120,848	121,145	123,641

(Amounts in tables in thousand United States dollars, unless otherwise stated)

23. COSTS AND EXPENSES (continued)

Following are general and administrative expenses associated with related parties (included in previous table):

	Years Ended December 31,		
	2019[a]	2018	2017
FMS	63,931	34,276	36,230
FCX	—	53,623	42,597
Total	63,931	87,899	78,827

a. Beginning in 2019, all general and administrative costs incurred by FCX and FMS are billed to the Company by FMS.

Selling and marketing expenses consist of the following:

	Years Ended December 31,		
	2019[a]	2018	2017
Employee costs	2,230	1,825	1,720
Other	—	406	422
Total selling and marketing expenses	2,230	2,231	2,142

a. Beginning in 2019, selling and marketing expenses are included in the monthly fee paid to FMS (see Note 24).

All selling and marketing expenses are from related parties.

Other expenses, net consist of the following:

	Years Ended December 31,		
	2019	2018	2017
Tax penalties (Note 15e)	122,688	—	
Foreign exchange loss	19,087	7,267	106
Other	327	538	53
Total other expenses, net	142,102	7,805	159

24. SIGNIFICANT AGREEMENTS

IUPK (Note 1a)

On December 21, 2018, the Company entered into an IUPK with the GOI. The IUPK replaced the former COW entered into in 1991.

PT Smelting Joint Venture Agreement

The Company, Mitsubishi Materials Corporation, Mitsubishi Corporation Unimetals Ltd. and JX Nippon Mining and Metals Corporation entered into the second amended and restated joint venture agreement and shareholders agreement for PT Smelting dated December 11, 1996. The Company and Mitsubishi Materials, amongst others, formed PT Smelting through a joint venture and shareholders' agreement dated October 25, 1995, to develop, construct and operate a copper smelter and refinery located at Gresik, East Java, Indonesia. The Company has a 25 percent equity ownership interest in PT Smelting (see Note 7 for further discussion).

24. SIGNIFICANT AGREEMENTS (continued)

PT Smelting Concentrate Agreement

The Company entered into a concentrate purchase and sales agreement with PT Smelting dated December 11, 1996, as amended. The Company's contract with PT Smelting provides for the supply of 100 percent of the copper concentrate requirements (at market rates subject to a minimum or maximum treatment charge rate) necessary for PT Smelting to produce 205,000 metric tons of copper annually (essentially the smelter's original design capacity) on a priority basis. The minimum rate, applicable to the period April 27, 2008, to April 30, 2020, is determined annually and must be sufficient to cover PT Smelting's annual cash operating costs (net of credits and including costs of debt service) for 205,000 metric tons of copper. The maximum rate applicable through April 30, 2017, was US$0.30 per pound and the maximum rate applicable for the period May 1, 2017, to April 30, 2020, is (i) a smelting charge of US$110.00 per metric ton and (ii) a payable copper refining charge of US$0.11 per pound. The agreement is an amendment to the long-term sales contract, which was approved by the Department of Energy and Mineral Resources of the GOI. The Company also sells copper concentrate to PT Smelting at market rates, which are not subject to a minimum or maximum rate, for quantities in excess of 205,000 metric tons of copper annually.

Atlantic Copper Concentrate Agreement

The Company entered into a copper concentrate sales agreement dated January 1, 2008 (the Atlantic Copper Concentrate Agreement), with Atlantic Copper to sell and deliver copper concentrate.

The Atlantic Copper Concentrate Agreement is in effect unless and until terminated by either party. Either party may, at its sole option and discretion, terminate this agreement as of the end of any calendar year subject to giving a twelve month written notice to the other party.

Under the terms of the Atlantic Copper Concentrate Agreement, the parties have agreed to sell and purchase between 575,000 and 625,000 metric tons of copper concentrate in each contractual year. For logistical and/ or operational considerations, the parties may mutually agree to defer the delivery of a portion of the contractual tonnage to another contractual year. The parties may cancel any such deferred tonnage during the mutually agreed year of delivery. The Company sold 30,273 metric tons of copper concentrate to Atlantic Copper in 2019, 83,884 metric tons in 2018 and none in 2017.

The purchase price for copper is the price equal to the daily official LME Grade A settlement price quoted in US dollars as published in "Metal Bulletin." The price for gold is equal to the daily average of the LBMA free bullion market "Initial" and "Final" quotations for gold in US dollars as published in "Metal Bulletin." The price for silver is equal to the daily LBMA bullion brokers spot price for silver quoted in US dollars as published in "Metal Bulletin." Under the Atlantic Copper Concentrate Agreement, which is consistent with the terms of third party concentrate sales agreements, the parties deduct the smelting and refining charge from the purchase price of the contractual tonnage. The smelting and refining charge is determined by calculating the weighted average of the combined smelting and refining charge with respect to all quantities of concentrate shipped under all of the Company's and Atlantic Copper's concentrate sales agreements with non-affiliated entities for the contract year for which the determination is being made. The parties also agreed to adjust such calculation by certain factors, including the purity of the concentrate delivered.

(Amounts in tables in thousand United States dollars, unless otherwise stated)

24. SIGNIFICANT AGREEMENTS (continued)

PT Puncakjaya Power Sales Agreement (Note 5)

The Company entered into an amended and restated power sales agreement with Puncakjaya Power dated December 18, 1997 (the Puncakjaya Power Sales Agreement), to purchase electricity from certain of Puncakjaya Power's facilities. The initial term of the Puncakjaya Power Sales Agreement expired in December 2017. The latest contract extension is for a 12-month period through December 17, 2020.

Puncakjaya Power is obliged (i) to provide the Company with electric capacity at the target capacity level, as specified under the agreement, (ii) to provide required electricity at a rate not exceeding the target capacity level and (iii) to use commercially reasonable efforts to satisfy any capacity exceeding the target capacity level.

The Company supplies diesel fuel to Puncakjaya Power under the terms of the restated services agreement dated December 1997 between the Company and Puncakjaya Power. In addition, the Company supplies coal to Puncakjaya Power under an agreement with PT Kaltim Prima Coal.

Under the terms of the Puncakjaya Power Sales Agreement, the Company is obliged to pay quarterly capacity charges and monthly operating and maintenance charges.

FM Services Company Service Agreement (Note 5)

The Company has a service agreement with FMS that was last amended on December 20, 2018. Under the agreement, FMS provides services necessary to support the Company's operations and activities, including mining operations consultation and advice, exploration, geology, management information technology, other administrative services and other such services as may be requested by the Company. The monthly service fee is US$9.2 million, subject to annual inflation adjustments. The monthly service fee for 2020 is US$9.3 million.

FCX Revolving Credit Agreement

The Company entered into an unsecured US$2.0 billion revolving credit agreement on December 21, 2018, with FCX (see Note 14 for further discussion).

JPMorgan Credit Agreement

The Company, FCX and FM O&G LLC entered into a US$3.5 billion, five-year unsecured revolving credit facility in April 2018 with JPMorgan Chase Bank, N.A. and certain other financial institutions (see Note 14 for further discussion).

25. SUPPLEMENTARY CASH FLOW INFORMATION

Changes in liabilities arising from financing activities in the consolidated statement of cash flows follow:

	Long-Term Debt
Balance at January 1, 2018	—
Cash flows	76,000
Balance at December 31, 2018	76,000
Cash flows	896,500
Balance at December 31, 2019	972,500

26. ACCOUNTING STANDARDS ISSUED BUT NOT YET EFFECTIVE

The following are accounting standards issued by DSAK that are considered relevant to the financial reporting of the Company but not yet effective for the 2019 financial statements:

Effective on or after January 1, 2020:

- PSAK No. 71, "Financial Instruments," was adopted from IFRS No. 9. The standard addresses the classification, measurement and derecognition of financial assets and financial liabilities, introduces new rules for hedge accounting and a new impairment model for financial assets. This standard must be adopted for financial years commencing on or after January 1, 2020
- Amendment to PSAK No. 1 and PSAK No. 25, "Accounting Policies, Changes in Accounting Estimates and Errors," on Definition of Material was adopted from amendments to IAS No. 1 and IAS No. 8. These amendments clarify the definition of material with the aim of harmonizing the definitions used in the conceptual framework and some relevant PSAKs. In addition, it also provides clearer guidance regarding the definition of material in the context of reducing over disclosure due to changes in the threshold of the material definition.

The Company is presently evaluating and has not yet determined the impact of these accounting standards on its consolidated financial statements.

27. PURPOSES OF PREPARATION AND ISSUANCE OF THE CONSOLIDATED FINANCIAL STATEMENTS

These consolidated financial statements have been prepared solely for inclusion in the offering document in connection with the proposed offering of the debt securities of PT Inalum in the US and outside of the US in reliance on Rule 144A and Regulation S, respectively, under the US Securities Act of 1933.

28. COMPLETION OF THE CONSOLIDATED FINANCIAL STATEMENTS

The management of the Company is responsible for the preparation of the consolidated financial statements that were authorized for issue by the management of the Company on April 2, 2020.

PT FREEPORT INDONESIA

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APPENDIX A — 2019 COAL RESERVES STATEMENT

BukitAsam
beyondcoal

COAL RESOURCES AND RESERVES STATEMENT

As per December 31st, 2019

PT Bukit Asam Tbk

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INTRODUCTION

This 2019 Report is the latest update on the Coal Resources and Reserves of PTBA and its subsidiaries, which includes data valid as of December 31, 2019. Total Resources of PTBA 5.5 Billion Tonnes and Total Reserves of PTBA 3.13 Billion Tonnes. The information contained in this report is prepared in reliance on existing resources and reserves report which have been prepared in accordance with the 2012 JORC Code, the 2011 KCMI Code, the 2017 KCMI code or the USGS Code. The resources and reserves data for mining licenses, at which there have been no production at since the relevant existing resources and reserves report, have replicated the data in such existing report.

Each of the Competent Persons have the appropriate professional membership and the relevant experience in relation to the reserves being reported by them to qualify as a Competent Person as defined under the KCMI Code. PTBA's in-house Competent Persons team includes Mr. Wali Al Hasunah and Mr. Bagus Totok Purnomo. Both of the Competent Persons have consented to the inclusion of the resources and reserves estimates in the form and context in which it appears in this 2019 Report.

Coal resources have been estimated for all coal seams that have reasonable prospects for eventual economic extraction by open cut or underground mining methods within mining licenses or exploration licences. In general, coal resources are reported within a geoshell limited by the areal and depth extent of the drill holes; in other words, there is very little inclusion of coal resources extrapolated beyond the extent of the geological data.

When determining the amount of Mineable Coal Reserves from Coal Resources, modifying factors related to aspects of mining such as metallurgical, economic, marketing, legal, environmental, infrastructural, social and governance factors, must be considered. In addition to that, within this report the amount of Mineable Coal Reserves are part of the Coal Resources estimation (inclusive approach).

Figure 1. Map of PT Bukit Asam's Mining Permit in Sumatera and Kalimantan island, Indonesia.

MINING LICENSES (IUPs) PTBA

As of December 31, 2019, PTBA held a total of 9 coal mining licenses ("IUPs"). As of the date of this 2019 Report, PTBA had (1) Tambang Air Laya IUP, Muara Tiga Besar IUP, Banko Barat IUP, which are located within the Tanjung Enim Coal Mine, and Bantuas IUP where they have active production operations; (2) Banko Tengah A IUP, Banko Tengah B IUP, and Peranap IUP where they have active but low levels of production operations which are still in initial production phase; and (3) Ombilin IUP and Bukit Kendi IUP where they have no active production operations.

Table 1. List of operation-production mining license PT. Bukit Asam Tbk. as of December 31st, 2019

No	Mining Permit Number	Location	Name of Mining License	Area (Ha)	Validity Period	
					Start	End
1	No. 308/1/IUP/PMDN/2019	Muara Enim, South Sumatera	Tambang Air Laya	7,621	29-Oct-10	31-Dec-20
2	No. 0367/DPMPTSP.V/VII/2018	Lahat, South Sumatera	Muara Tiga Besar	2,866	30-Aug-19	30-Aug-29
3	No. 1/1/IUP/PMDN/2019	Muara Enim, South Sumatera	Banko Barat	4,500	11-Oct-11	10-Apr-27
4	No. 307/1/IUP/PMDN/2019	Muara Enim, South Sumatera	Banko Tengah A	2,423	13-Apr-10	9-Sep-35
5	No. 389/KPTS/TAMBEN/2010	Muara Enim, South Sumatera	Banko Tengah B	22,937	13-Apr-10	13-Sep-35
6	No. 503/2253/IUP-OP/BPPMD-PTSP/XI/2016	Samarinda, East Kalimantan	Bantuas Samarinda*	3,238	30-Nov-16	30-Nov-26
7	No. 09/IUP/545-02/IV/2010	Indragiri Hulu, Riau	Peranap	18,230	22-Apr-10	22-Apr-35
8	No. 99/I/IUP/PMDN/2019	Sawahlunto, West Sumatera	Ombilin**	2,935	8-Mar-19	16-Feb-29
9	No. 305/KPTS/DISTAMBEN/2010	Muara Enim, South Sumatera	Bukit Kendi*	882	30-Apr-10	25-Oct-25

Notes:
*Less coal reserves, going into final pit operation
**Area is declared as World Heritage Site by UNESCO

Table 2. Coal resources and reserves summary of PT Bukit Asam Tbk. and its subsidiary as of December 31st, 2019

No	Nama of Mine	Name of Mining License (IUP)	Resource (Million Ton)	Reserve (Million Ton)
1	Tanjung Enim Mine Unit	Tambang Air Laya	712	405
2		Muara Tiga Besar	352	206
3		Banko Barat	550	288
4		Banko Tengah A	371	363
5		Banko Tengah B	2,756	1,559
6	Peranap Mine	Peranap	634	275
7	Ombilin Mine	Ombilin**	102	23
8	IPC-Bantuas Mine	Bantuas Samarinda*	23	5
9	Bukit Kendi Mine	Bukit Kendi*	2.75	0.91
	Total PTBA (Million Ton)		5,503	3,125

Notes:
*Less coal reserves, going into final pit operation
**Area is declared as World Heritage Site by UNESCO

COAL RESOURCES & RESERVES OF PT BUKIT ASAM Tbk SUBSIDIARIES

Tanjung Enim Coal Mine

PTBA's main and largest active mine is located in Tanjung Enim, South Sumatera Province, Indonesia with a total covered area of 40,781 hectares (excluded Bukit Kendi 882 hectares). The Tanjung Enim coal mine contains 5 operation-production IUPs, including (1) Tambang Air Laya, (2) Muara Tiga Besar, (3) Banko Barat, (4) Banko Tengah A, and (5) Banko Tengah B. The first three IUPs mentioned above are the existing active mine area, while the remaining two are still being developed for large-scale mining. All of the mines within the Tanjung Enim coal mine are classified as open cut mine. In 2018 and 2019, total coal mine production at the Tanjung Enim coal mine was 25.4 million tonnes and 28.07 million tonnes, respectively.

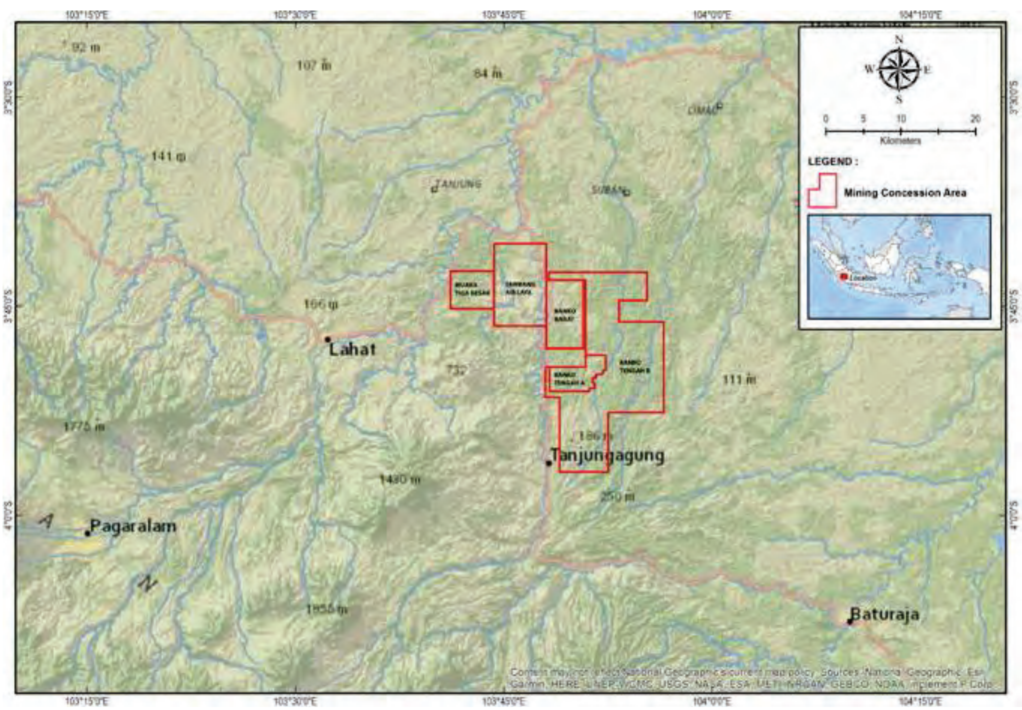

Figure 2. Map of the Tanjung Enim IUP in Muara Enim and Lahat Regency, South Sumatera Province, Indonesia.

The coal resources and reserves estimation for the Tanjung Enim coal mine as of December 31, 2019, are provided in table 3 and table 4 below. The estimation of IUPs Tambang Air Laya, Muara Tiga Besar and Banko Barat are based on the resources and reserves data in 2018 Tanjung Enim Report then subtracted by actual coal production at the Tanjung Enim during 2019 period. On the other hand, the estimation of IUPs Banko Tengah A and Banko Tengah B is determined by reference to the resources and reserves data in the 2015 KCMI Tanjung Enim Report and subtracting actual coal production at the Tanjung Enim coal mine since the date of the 2015 Tanjung Enim Report up to December 31st, 2019.

Table 3. Coal resources estimation in Tanjung Enim coal mine as of December 31st, 2019 in million tonnes

No	IUP	Coal Resources (Mt)			Total (Mt)	Coal Quality				
		Inferred	Indicated	Measured		TM (%) ar	ASH (%) adb	TS (%) adb	CV (Kcal/Kg) adb	CV (Kcal/Kg) ar
1	Tambang Air Laya	49	229	433	712	22.10	5.07	0.50	6,036	5,438
2	Muara Tiga Besar	21	56	275	352	28.17	5.28	0.52	5,753	4,809
3	Banko Barat	18	86	446	550	24.58	4.41	0.53	6,025	5,240
4	Banko Tengah A	2	185	184	371	34.42	8.52	0.54	5,360	4,099
5	Banko Tengah B	1,030	1,300	426	2,756	35.21	8.08	0.43	5,122	4,030
Total Tanjung Enim Mine		**1,120**	**1,856**	**1,764**	**4,741**					

Table 4. Coal reserves estimation in Tanjung Enim coal mine as of December 31st, 2019 in million tonnes

No	IUP	Coal Reserves (Mt)		Total (Mt)	Coal Quality				
		Probable	Proven		TM (%) ar	ASH (%) adb	TS (%) adb	CV (Kcal/Kg) adb	CV (Kcal/Kg) ar
1	Tambang Air Laya	112	293	405	22.67	5.51	0.47	6,047	5,342
2	Muara Tiga Besar	14	192	206	28.31	6.01	0.55	5,728	4,745
3	Banko Barat	4	284	288	25.08	4.94	0.56	5,993	5,161
4	Banko Tengah A	182	181	363	33.11	8.53	0.55	5,359	3,922
5	Banko Tengah B	1,170	389	1,559	35.00	8.49	0.42	5,072	3,928
Total Tanjung Enim Mine		**1,482**	**1,339**	**2,821**					

Peranap Coal Mine

PTBA's Peranap IUP is located in Indragiri Hulu Regency, Riau Province, Indonesia with a total covered area of 18,230 hectares. Peranap IUP is classified as an operation-production IUP, and is a part of PTBA development plan. Peranap Mine still under initial production phase as the date of this 2019 report. The Peranap coal mine is classified as an open cut mine.

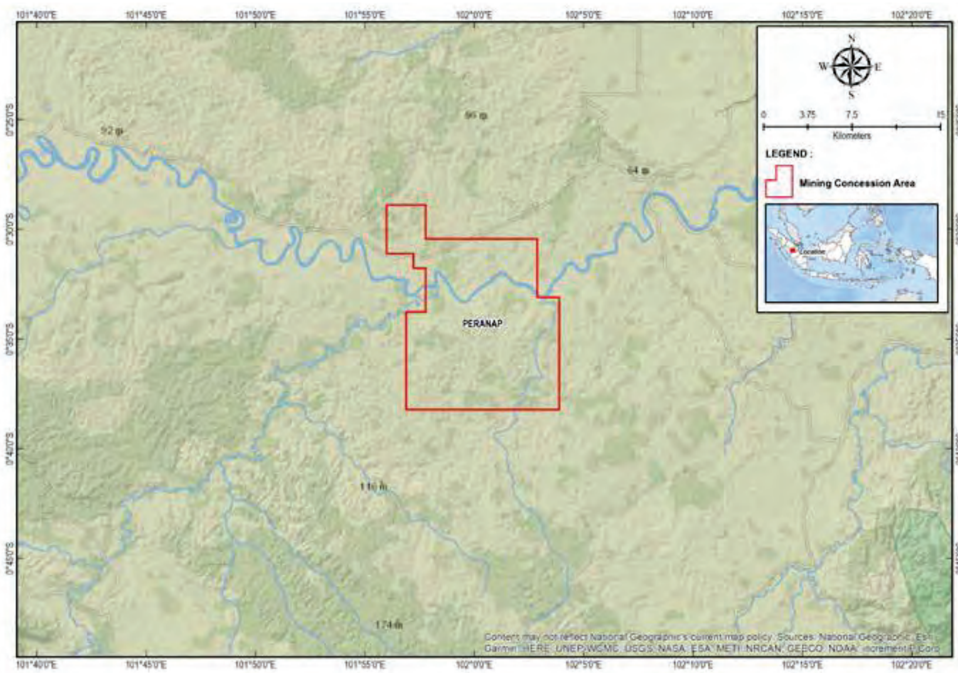

Figure 3. Map of the Peranap IUP in Indragiri Hulu Regency, Riau Province, Indonesia.

The coal resources and reserves data for the Peranap coal mine as of December 31, 2019, provided in table 5 and table 6 replicates the resources and reserves data set forth in the 2018 Peranap JORC Report. As a result of insignificant production in this area, there has been no material change in the resources and reserves data, since the date of the 2018 Peranap JORC Report.

Table 5. Coal resources estimation in Peranap IUP as of December 31st, 2019 in million tonnes.

No	IUP	Coal Resources (Mt)			Total (Mt)	Coal Quality				
		Inferred	Indicated	Measured		TM (%) ar	ASH (%) adb	TS (%) adb	CV (Kcal/Kg) adb	CV (Kcal/Kg) ar
1	Peranap	61	362	211	634	50.13	10.70	0.28	4,677	2,818

Table 6. Coal reserves estimation in Peranap IUP as of December 31st, 2019 in million tonnes.

No	IUP	Coal Reserves (Mt)		Total (Mt)	Coal Quality				
		Probable	Proven		TM (%) ar	ASH (%) adb	TS (%) adb	CV (Kcal/Kg) adb	CV (Kcal/Kg) ar
1	Peranap	124	151	275	50.50	11.60	0.30	4,563	2,715

Ombilin Coal Mine

Ombilin IUP is located in Sawahlunto City, West Sumatera Province, Indonesia with a total covered area of 2,935 hectares. The Ombilin coal mine is the oldest coal mine in Indonesia and is currently declared as a World Heritage Site by UNESCO. The Ombilin Mine is classified as an underground mine. Mine operations at the Ombilin coal mine have been suspended and are still under economic re-evaluation.

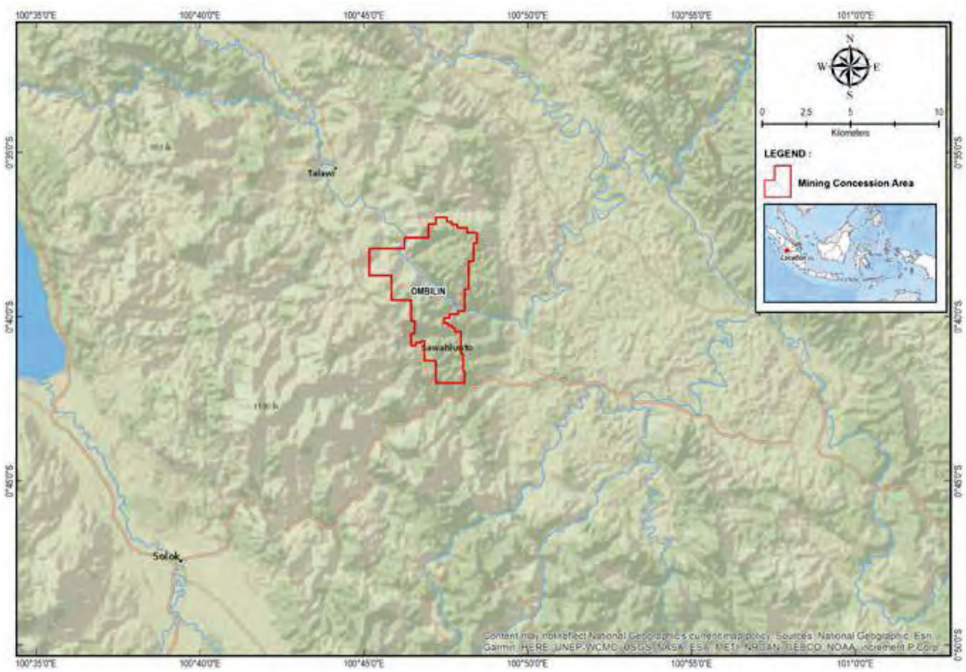

Figure 4. Map of the Ombilin IUP in Sawahlunto Regency, West Sumatera Province, Indonesia.

The coal resources and reserves data for the Ombilin coal mine as of December 31, 2019, provided in Table 7 below replicates the resources and reserves data set forth in the 2009 Ombilin USGS Report by IMC, as there has been no production at the Ombilin coal mine, and therefore no material change in the resources and reserves data, since the date of the 2009 Ombilin USGS Report.

Table 7. Coal resources estimation in Ombilin IUP as of December 31st, 2019 in million tonnes.

No	IUP	Coal Resources (Mt)			Total (Juta Ton)	Coal Quality				
		Inferred	Indicated	Measured		TM (%) ar	ASH (%) adb	TS (%) adb	CV (Kcal/Kg) adb	CV (Kcal/Kg) ar
1	Ombilin	0	16	86	102	9.00	8.00	1.30	7,300	7,179

Table 8. Coal reserves estimation in Ombilin IUP as of December 31st, 2019 in million tonnes.

No	IUP	Coal Reserves (Mt)		Total (Mt)	Coal Quality				
		Probable	Proven		TM (%) ar	ASH (%) adb	TS (%) adb	CV (Kcal/Kg) adb	CV (Kcal/Kg) ar
1	Ombilin	0	23	23	9.00	8.00	1.30	7,300	7,179

COAL RESOURCES & RESERVES OF PT BUKIT ASAM Tbk SUBSIDIARIES

Internasional Prima Coal (IPC) – Bantuas Coal Mine

The Bantuas IUP, which PTBA holds through its subsidiary IPC that holds 51% shares, is located in Samarinda City, East Kalimantan Province, Indonesia, with a total covered area of 3,238 hectares. The Bantuas Mine is classified as an open cut mine. In 2019, total coal mine production at the Bantuas coal mine was 989 thousand tonnes.

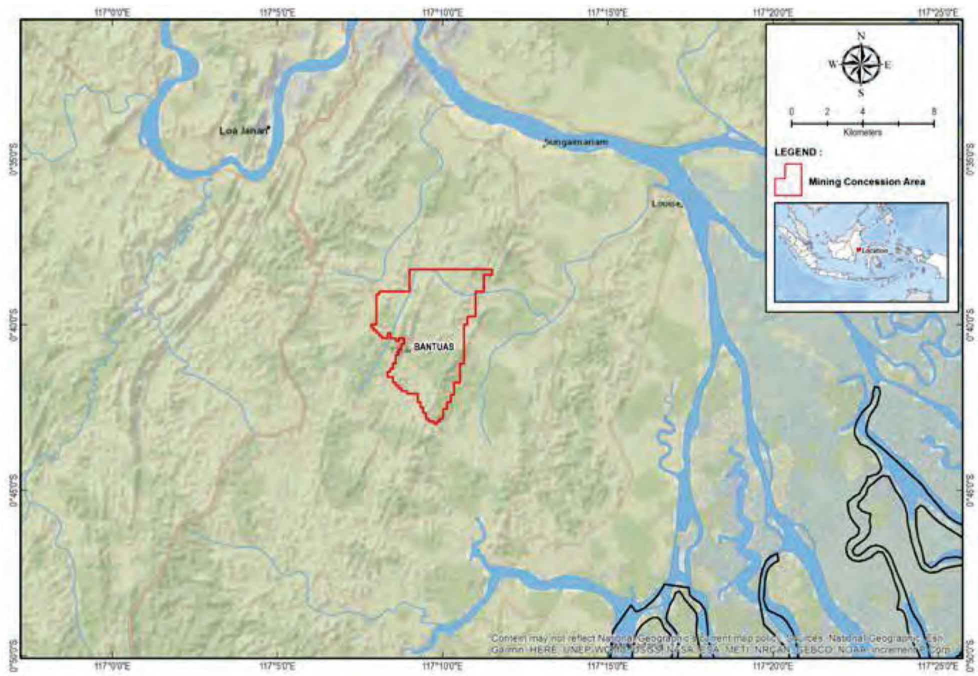

Figure 5. Map of the Bantuas IUP in Samarinda, East Kalimantan Province, Indonesia.

The coal resources and reserves estimation for the Bantuas coal mine as of December 31, 2019, provided in Table 10 and Table 11 below. The estimation is determined by reference to the resources and reserves data in the 2016 Bantuas Report and subtracting actual coal production at the Bantuas coal mine since the date of the 2016 Bantuas Report up to December 31, 2019. Curently, Bantuas coal mine has 5.2 million tonnes of coal reserves and going into final pit operations.

Table 9. Coal resources estimation in Bantuas IUP as of December 31st, 2019 in million tonnes

No	IUP	Coal Resources (Mt)			Total (Mt)	Coal Quality				
		Inferred	Indicated	Measured		TM (%) ar	ASH (%) adb	TS (%) adb	CV (Kcal/Kg) adb	CV (Kcal/Kg) ar
1	Bantuas Samarinda	1	2	20	23	22.35	3.48	1.13	5,910	5,361

Table 10. Coal reserves estimation in Bantuas IUP as of December 31st, 2019 in million tonnes.

No	IUP	Coal Reserves (Mt)		Total (Mt)	Coal Quality				
		Probable	Proven		TM (%) ar	ASH (%) adb	TS (%) adb	CV (Kcal/Kg) adb	CV (Kcal/Kg) ar
1	Bantuas Samarinda	1.6	3.7	5.2	21.05	3.31	1.25	5,970	5,472

Bukit Kendi Coal Mine

PTBA's subsidiary, PT Batubara Bukit Kendi, owns 98% interests in the Bukit Kendi IUP, which is located in Muara Enim Regency, South Sumatera Province, Indonesia, with a total covered area of 882 hectares. Mining operation in Bukit Kendi Mine has been stopped since 2010. As of the date of this report, active operations have not begun at the Bukit Kendi coal mine. The Bukit Kendi mine is classified as an open cut mine.

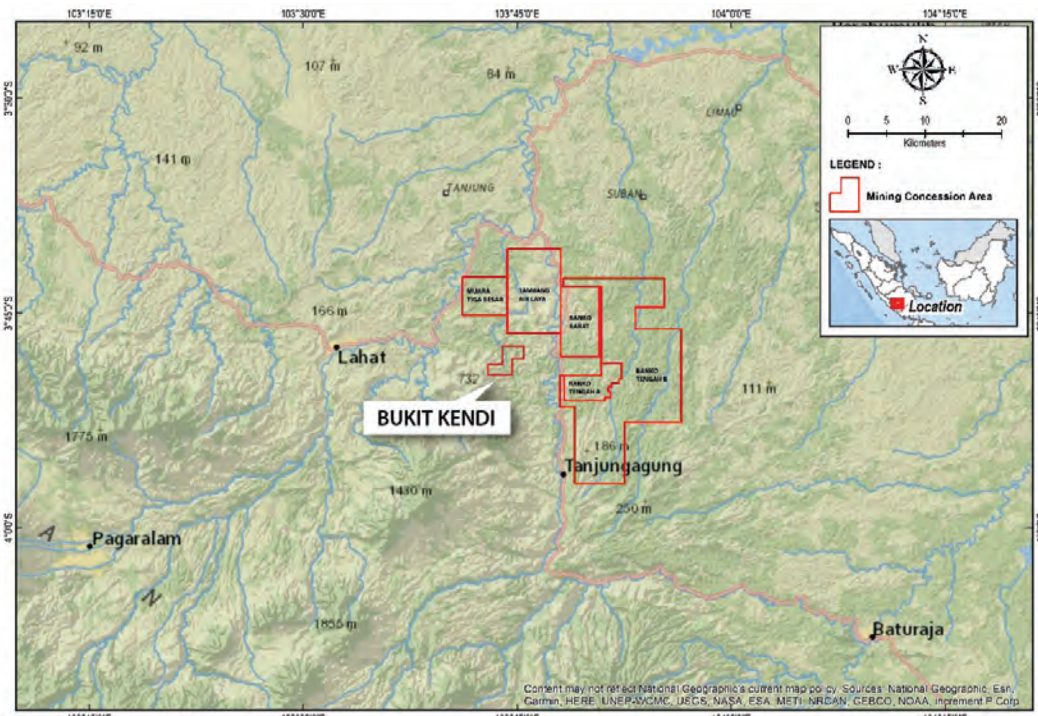

Figure 6. Map of the Bukit Kendi IUP in Muara Enim Regency, South Sumatera Province, Indonesia

The coal resources and reserves data for the Bukit Kendi coal mine as of December 31, 2019, provided in Table 14 and Table 15 below replicates the resources and reserves data set forth in the 2018 Bukit Kendi KCMI Report, as there has been no production at the Bukit Kendi coal mine, and therefore no material change in the resources and reserves data, since the date of the 2018 Bukit Kendi KCMI Report.

Table 11. Coal resources estimation in Bukit Kendi IUP as of December 31st, 2019 in million tonnes

No	IUP	Coal Resources (Mt)			Total (Mt)	Coal Quality			
		Inferred	Indicated	Measured		TM (%) ar	ASH (%) adb	TS (%) adb	CV (Kcal/Kg) ar
1	Bukit Kendi	0.23	0.42	2.11	2.75	25.97	6.50	0.24	4,827

Table 12. Coal reserves estimation in Bukit Kendi IUP as of December 31st, 2019 in million tonnes.

No	IUP	Coal Reserves (Mt)		Total (Mt)	Coal Quality			
		Probable	Proven		TM (%) ar	ASH (%) adb	TS (%) adb	CV (Kcal/Kg) ar
1	Bukit Kendi	0.25	0.66	0.91	25.70	7.20	0.20	4,813

CONSENT

I consent to the release of the Report and this Consent Statement by the directors of:

PT BUKIT ASAM Tbk

(Insert reporting company name)

Wali Al Hasunah	December 31st, 2019
Signature of Competent Person:	Date:
PERHAPI	CPI-024
Professional Membership: *(insert organisation name)*	Membership Number:
Bagus Totok Purnomo	December 31st, 2019
Signature of Competent Person :	Date :
PERHAPI	CPI-199
Professional Membership (*insert organization name*)	Membership Number :
	Fuad I. Z. Fachroeddin Director of Business Development PT Bukit Asam Tbk. Jakarta - Indonesia
Signature of Witness:	Print Witness Name and Residence: (eg town/suburb)

STATEMENT

I am,
Wali Al Hasunah

confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the Komite Cadangan Mineral Indonesia (KCMI) 2017 Code for Reporting of Coal Reserves.
- I am a Competent Person as defined by the KCMI Code, along with the Competent Person Team of PT Bukit Asam Tbk having more than five years experience that is relevant to the type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I have reviewed the Report to which this Consent Statement applies.

I am a full time employee of

PT Bukit Asam Tbk

and have been engaged by

PT Bukit Asam Tbk

to prepare the documentation for

To coordinate the Competent Persons in preparing the documentation for updating coal resource and reserve report

on which the Report is based, for the period ended

December 31st, 2019

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Mineral Resources and Ore Reserves.

STATEMENT

I am,
Bagus Totok Purnomo

confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the Komite Cadangan Mineral Indonesia (KCMI) 2017 Code for Reporting of Exploration Results.
- I am a Competent Person as defined by the KCMI Code, along with the Competent Person Team of PT Bukit Asam Tbk having more than five years experience that is relevant to the type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I have reviewed the Report to which this Consent Statement applies.

I am a full time employee of

PT Bukit Asam Tbk

and have been engaged by

PT Bukit Asam Tbk

to prepare the documentation for

Preparing table 1 exploration section

on which the Report is based, for the period ended

December 31st, 2019

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Mineral Resources and Ore Reserves.

APPENDIX

Table 1

Section 3 Estimation and Reporting of Coal Resources for Tanjung Enim

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• All data used as the basis for geological model and Resources estimation has been initially recorded in the field by well site geologist from drilling. The coal depth and thickness is then adjusted by geophysical logging. • All data points were surveyed using Total Station • All data used as point of observations are compliant with the requirement of the JORC code.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• A site inspection to review all aspects of the exploration procedure and site condition was undertaken by Competent Persons in March 2015.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• Geological continuity of the main seam in project area was demonstrated. Any discontinuity, missing or pinched out seams were identified and interpreted in all area. • Boreholes data in compliance with JORC 2012 has been used to undertake all assessment. • N/A • The resources were controlled by seam thickness, depth, weathering zone and continuity. • Some of the seams in project area exhibit thinning and/or are missing.This as a result of faulted that lifted the seam above topography and eroded or truncated by intrusions in certain parts of the area.

Criteria	JORC Code explanation	Commentary
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The main seams occur approximately 16.0 kilometres (km) in strike from Muara Tiga Besar to Banko Tengah B Selatan.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.*	• The estimation technique and assumption are in line with best practice industry standard and were control by the competent person. Britmindo has used MineScape Stratmodel V 4.119 in generating geological model. 2,000 to 5,000 m extrapolation was used in the model. • Any previous estimates are not considered relevant to this assessment as this report is based on different standard and purpose. • N/A • Full ranges of testing relevant to coal deposit in Indonesia was undertaken as part of the study. • N/A • N/A • N/A • The resources were controlled by seam thickness, depth and weathering zone. • N/A • Model data validation and comparison to the raw borehole data was undertaken as part of geological model process.

Criteria	JORC Code explanation	Commentary
	• *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• The tonnages were estimated using In-situ Moisture. Total Moisture on an as received basis was assumed as In-situ Moisture
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• Minimum seam thickness 0.50 m • No quality cut-off was applied.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions*	• Mining method will be open cut coal mining with depth restriction mostly to RL minus (-) 200m approximately 300m depth from topography. No assumptions have been applied for mining loss and dilution. • Pit optimisation exercise was undertaken to justify the Reasonable Prospects for eventual economic extraction.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when*	• No metallurgical factors or assumptions were undertaken in the Resources Reporting

Criteria	JORC Code explanation	Commentary
	reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	
Environmen-tal factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• Rehabilitation and reclamation cost have been considered in determining reasonable prospects for eventual economic extraction. At the evaluation of Resources stage other environmental factors have not been taken into the consideration.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• No bulk density testing has been undertaken at this stage.

Criteria	JORC Code explanation	Commentary
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The Measured and Indicated Resources were classified based on the geological confidence level within area that mine planning and economic evaluation can be undertaken. • Appropriate account has been undertaken including data validation, confidence in geological continuity, quality and economic viability. • The assessment results are in line with the Competent Person view of the deposit.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• Internal peer review was undertaken.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.*	• At this stage the statement is considered relatively accurate with good confidence levels due to the qualitative and quantitative check and procedures which has been reviewed by the Competent Person. • The statement is related to the local estimate. • No comparison with historical production data has been undertaken at the Resources assessment stage.

	• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	

Section 4 Estimation and Reporting of Coal Reserves for Tanjung Enim

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• Only Measured and Indicated Resources were converted to JORC Proven and Probable Reserves. • The Coal Resources are inclusive of Mineable Reserves
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• A site inspection to review all aspects of the mining operation and infrastructure was undertaken by Competent Persons in March 2015.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• A Life of Mine Plan Study that includes consideration of all Modifying Factors was undertaken in encompassing mining, coal handling, infrastructure, legal, economic viability, marketing, social and environment factors.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied*	• Coal quality is determine as a multiple calorific value specification ranging from CV 3,700 kcal/kg (gar) to C
Mining factors or assumptions	• *The method and assumptions used as reported in the PreFeasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.*	• The Coal Reserves were estimated through the pit optimisation process, selection of the economic pit shell and detailed practical final pit generation. • The Open Cut Coal Mining method using shovel and trucks and bucket wheel with belt conveyor is used, considering pre-stripping and conventional box-cut mining methods.

Criteria	JORC Code explanation	Commentary
	• *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods*	• Geotechnical study in one of the concession has been undertaken for the pit slope stability and the values reported have been used as a basis of design parameters. • Major assumptions used in the pit optimisation are revenue, cost and pit slope. • Mining dilution of 0.025m is included only for floor. Coal loss of 0.10m of thickness and 3% additional geological loss were applied for mining recovery. Additional 3% global loss is applied in determining coal saleable recovery in the economic model. Berm width, ramp width and working section were taken into account to allow efficient mining equipment operation. • All infrastructure requirements for the mine operations has been taken into account such as Stockpile, weigh bridge, offices, maintenance workshops, power generation requirements, etc.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.*	• Coal processing will be undertaken as the coal product is categorised as crushed coal. • Coal blending and processing in Indonesia is a mature discipline, has a good track record and is therefore well understood. • Any metallurgical process are not applicable to this report.

Criteria	JORC Code explanation	Commentary
	• *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.*	• The capital expenditure required to satisfy a production increase to a 30 Mtpa coal mine operations has been applied. Britmindo has used cost information provided by PTBA, which is considered both reasonable and appropriate.
	• *The methodology used to estimate operating costs*	• Unit rate based on PTBA internal cost assumption have been used to estimate total operating costs. They have been reviewed by Britmindo and are considered appropriate and reasonable in the current market place

Criteria	JORC Code explanation	Commentary
	• *Allowances made for the content of deleterious elements.* • *The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• The analysis includes a balance blending schedule which demonstrates that the overall quality characteristics are in line with target market specifications. • Based on Indonesian Bank mid-rates on US$ exchange. • The report assumes that product quality will meet market specification. • The report recognises government royalties in line with the current legislation.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodityprice(s), for the principal metals, minerals and co-products*	• The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported. • Same assumptions made as in cost factors above.
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification* • *Price and volume forecasts and the basis for these forecasts* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• The market analysis has been carried out by examining the following: 1. Competitor Review 2. Overview of Coal Inventory and Demands 3. Estimated Demand 4. Thermal Coal Long Term Overview 5. Coal Price 6. Market Growth Opportunities

Criteria	JORC Code explanation	Commentary
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• Economic model has been in the Life of Mine Plan Study
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• No agreement is available at this time.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the PreFeasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• N/A • PTBA holds an operating mine licence and several legal and statutory approvals are in place.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit*	• The classification of Coal Reserves is based on Measured and Indicated Resources Confidence Levels • The classification has been reviewed and is supported by the Competent Person's views

Criteria	JORC Code explanation	Commentary
	• *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• All Measured Resources is converted into Proven reserves
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates*	• Internal peer review was undertaken.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• All competent persons and project peer reviewer concur that the levels of confidence reported are appropriate for this type of report. • The statement refers predominantly to local estimates including geology, topography, geotechnical, physical conditions, social requirements and other relevant input data. • All relevant modifying factors have been applied in accordance with JORC 2012 recommendations

Section 4 Estimation and Reporting of Ore Reserves for Bukit Kendi

Criteria	Comment
Estimation of Coal Resources for conversion to Coal Reserves	• Only Designated and Measured Resources are converted into Proven and Probable KCMI Reserves.. • Coal resources are included in coal reserves.
Basic Studies	• The Mine Age Planning Study which includes consideration of all Changing Factors has been carried out including mining, coal handling, infrastructure, economic, marketing, legal, environmental and social factors.
Parameter-parameter Cut-off	• Coal quality is determined for various specifications of CV values ranging from CV 4,600 kcal / kg (gar) to CV 4,900 kcal / kg (gar).
Mining Factors or Assumptions	• Coal reserves are estimated through the pit optimization process, the selection of economical pit shells and the creation of detailed practical final pits. • Coal reserves are estimated through the pit optimization process, the selection of economical pit shells and the creation of detailed practical final pits. • The open coal mining method uses a combination of truck and shovel and Bucket Wheel by considering pre-striping and box-cut mining methods. • A geotechnical study at one of the mining license (IUP) has been carried out for slope stability analysis and the results are used for mine design parameters Asumsi utama yang digunakan dalam optimisasi pit adalah harga jual, pendapatan, biaya dan sudut lereng pit. • 0.025m of mine dilution is inserted from the floor. Loss of coal as thick as 0.10m and an additional 3% of geological loss is applied to mine acquisition. An additional 2% of global loss is imposed in determining the acquisition of marketable coal and economic models. Berm width, ramp width and work area are calculated so that the mining equipment operates efficiently • All existing infrastructure needed to operate the mine has been calculated such as stockpiles, ports, weigh bridges, offices, maintenance workshops, power plants etc.
Metallurgical Factors or Assumptions	• Coal processing is done because the product is categorized as crushed coal. • Coal mixing and processing is common in Indonesia and has a good track record and is therefore very well understood. • The metallurgical process is not carried out in coal mining.
Cost and Revenue Factors	• The investment costs needed to meet the production of 100 million tons per year have been calculated based on information submitted by PTBA and are considered acceptable. • Unit rate based on PTBA's internal cost assumptions has been used to estimate the total operational costs. These costs have been reviewed by Britmindo and are considered acceptable in current market conditions.

	• Analysis of revenue and costs including balance scheduling shows that overall coal quality characteristics are in line with target market specifications. • Britmindo has used coal sales prices by considering coal price fluctuations 2 years back for the next 2 years projection. • Based on the US $ Bank Indonesia central exchange rate. • This report assumes that the quality of coal products will meet the needs of market specifications. • The report has also calculated royalties to the government in accordance with current regulations.
Market Evaluation	• Market analysis has been carried out by examining the following : - Competitive Review - Estimated Coal Prices - Market growth opportunities
Others	• N/A • BBK has mining operation permits, IPPKH, exports and other required permits.
Classification	• Calcification of Coal Reserves based on Confidence Levels of Measured and Designated Resources. • The classification has been reviewed and supported with the views of the Competent Persons. • All Measured Resources are converted into Proven Reserves.
Audit or Review	• Internal audits and reviews have been conducted
Discussion of relative accuracy / confidence	• The Competent Person and project reviewer conclude that the level of confidence reported is adequate for this type of report. • Statements are local, including geology, topography, geotechnical engineering, physical conditions, social needs and other relevant input data. • At this stage the statement is considered to be relatively accurate with a good level of confidence because qualitative and quantitative checks have been made by the Competent Person • Comparison with production data history is not done at this stage.

Section 3 Estimation and Reporting of Coal Resources for Peranap

<table>
<tr><th>Criteria</th><th>Comment</th></tr>
<tr><td>Database Integration</td><td>All drilling data used in geological models have been recorded by geologists in the field through both cutting samples and core cores. Then to ensure thickness, the description is corrected / compared with geophysical logging data.
Lithology data has been validated by Britmindo by using geophysical logging data to get the correct coal thickness / interval. Some coal thicknesses have been corrected before.
2-dimensional cross section checking has been carried out to check the structure and thickness anomaly
Coal quality data has been validated using statistical (regression) methods for checking anomalous results
All borehole elevations have been compared to topographic elevations at the same point. This is to ensure there are no structural errors in the slope of the layer or strip ratio.</td></tr>
<tr><td>Geological interpretation</td><td>Geological interpretation is considered to have high accuracy that can be relied upon because of geological conditions that are simple and easily understood
Geological models are made, all based on drilling data. The LIDAR topographic surface is used as a barrier that controls the surface of the upper deposit.
Coal resource estimation is controlled by thickness, depth, weathering zone, and continuity of coal seams.</td></tr>
<tr><td>Dimension</td><td>Coal deposits are approximately 8,500 m north-south and 6,700 m north-east, or about 5,820 ha.
The resource area starts from the subcrop / outcrop near the surface to the maximum depth at 100 m elevation.</td></tr>
<tr><td>Modeling and estimation techniques</td><td>The geological modeling process, estimates and assumptions are in accordance with general industry standards. Britmindo has used Minescape Stratmmodel V4 in building geological models. The maximum extrapolation distance is 1,000 m beyond the last data, but resources have been limited by 1/3 of the average distance between drill bits.
Modeling parameters, namely :
- Minimum coal thickness estimated -0.3 m
- Base of seathering - modeled according to drill data
- All coal seams are cut off by weathering zones
Seam Relationship – Conformable
Element Seam Continuity – Pinch
Compound Seam Continuity – Pinch
<table>
<tr><th>NO</th><th>PARAMETER</th><th>Peranap</th></tr>
<tr><td>1</td><td>Topography Model Cell Size</td><td>10m x 10m</td></tr>
<tr><td>2</td><td>Geology Model Cell Size</td><td>25m x 25m</td></tr>
<tr><td>3</td><td>Modelling Option</td><td>All</td></tr>
<tr><td>4</td><td>Interpolator Search Radius</td><td>1,000</td></tr>
<tr><td>5</td><td>Model Extrapolation Distance</td><td>1,000</td></tr>
</table></td></tr>
</table>

<table>
<tr><td></td><td>

6	*Interpolator – Thickness*	Planar (0)
7	*Interpolator - Surface*	FEM (1)
8	*Interpolator – Trend*	Planar (1)
9	*Partings*	Yes
10	*Interval Lithology Code*	CO
11	*Trend Surface*	No
12	*Faults*	No
13	*Limit Polygons*	Yes
14	*Survey Data*	Yes

- *If there are resource estimates made before this report, then this estimation report can be considered to have replaced the results of the previous estimate.*
- *Coal quality related to HGI, Ultimate Analysis, Ash Analysis, Forms of Sulfur is not included in the geological model*
- *Associated with the possibility of corrosion can be seen in the results of Ash Analysis (Sodium Na2O) in Appendix D. However, from an average that shows below 2%, it will not adversely affect the boiler.*
- *Britmindo has compared drill data with data from modeling results, where the results can be concluded that the geological model formed does not ignore drilling data.*
</td></tr>
<tr><td>Lengas (moisture)</td><td>• Coal tonnage estimation uses an in situ Moisture base. Due to the absence of EQM / MHC data that can be considered as in situ Moisture, the value of in situ Moisture is assumed to be the same as the value of Total Moisture.</td></tr>
<tr><td>Cut-off Parameter</td><td>• The minimum estimated coal thickness is 0.30 m
• There are no restrictions on the quality of coal
• Geologist losses are not applied to estimates.</td></tr>
<tr><td>Mining Factors or Assumptions Relating to Mining</td><td>• The mining method is open pit mining with depth restrictions based on recommendations from Geotechnics. Mining losses and dilution are applied in the Reserve estimation process (separate report).</td></tr>
<tr><td>Metallurgical Factors and their Assumptions relating to Metallurgy</td><td>• No Metallurgical factor was applied to the Resource estimation process</td></tr>
<tr><td>Bulk Density</td><td></td></tr>
<tr><td>Classification</td><td>• All data used as Observation Points (quantity and quality) have been validated and fulfill the minimum requirements as regulated in SNI.
• The explanation of Classification can be found in Chapter 8.2.</td></tr>
<tr><td>Discussion of relative accuracy / confidence</td><td></td></tr>
</table>

Section 4 Estimation and Reporting of Coal Reserves for Peranap

Criteria	Comment
Estimation of Coal Resources for conversion to Coal Reserves	• *Only Designated and Measured Resources are converted into Calculated and Proven KCMI Reserves.* • *Coal resources are included in coal reserves.*
Basic Studies	• *Mine Age Planning Study which includes consideration of all Modifier factors that have been carried out include mining, processing, metallurgical, economic, marketing, legal, environmental, infrastructure, social and government factors*
The Cut-off Parameters	• *Coal quality is determined for various CV value specifications ranging from CV 2500 kcal / kg (gar) to CV 2800 kcal / kg (gar)*
Factors of Mining or Assumptions	• *Coal reserves are estimated through the process of pit optimization, economical pit pit selection and detailed practical pit pitching* • *Open coal mining method using truck and shovel combinations with consideration of pre-striping and box-cut mining methods.* • *Geotechnical studies in the IUP region have been carried out for slope stability analysis and the results have been applied to mine design parameters.* • *The key assumptions used in pit optimization are revenue margin targets, operating costs and pit slopes.* • *A total of 0.1m mine is included from the roof & floor. 0.20m of coal loss and an additional 1% of global loss are applied to determine marketable coal availability and economic model. Meter width, ramp access and work area are calculated for the mine to operate efficiently.* • *All existing infrastructure needed to operate the mine has been taken into account such as freight, stockpile, pier, weigh bridge, office, maintenance workshop, power plant etc.*
Metallurgical Factors or assumptions	• *Coal processing is performed because the product is categorized as crushed coal.* • *Coal mixing and processing is common in Indonesia and has a good track record so it is well understood.* • *Metallurgical processes are not performed in this coal mining.*
Cost Factors and Income	• *The investment cost needed to meet the production of 11 million tonnes per year has been calculated based on the information provided by PTBA and considered acceptable.* • *Unit rates based on PTBA's internal cost assumptions have been used to estimate total operating costs. These costs have been reviewed by the implementing team and are considered acceptable under current market conditions.* • *Revenue analysis is planned based on target of 20% & 25% of operating cost which shows that overall characteristics of coal quality in line with MMPP specification* • *Assumption of the value of coal selling price based on the reference of regulation "Permanent Energy No. 09 of 2016 and "Engineership No. 7424 In 2016, where coal prices were raised*

	from operating costs including target margins plus government royalties • *Based on the US $ Bank Indonesia central exchange rate*
Market Evaluation	• *The Government's MMPP tender project is the basis for analyzing the market by considering the following:* - *National electricity needs* - *The need for electricity using coal fuel is now more economical* - *Support Government programs for low calorie coal utilization* - *Low calorie coal availability*
Something else	• *Regulatory changes related to MMPP objectives by the government* • *PTBA has mine operating permit, IPPHH, export permit and other required permissions.*
Classification	• *Classification of Coal Suggestions based on Measured and Specified Resource Confidence Levels* • *Classification has been researched and supported by the views of Competent Person.* • *All Measurable Resources are converted into Proven Suggestions.*
Audit or Review	• *Internal audit and review is done*
Discussion of accuracy / Relative confidence	• *Competent Person and project reviewer conclude that the level of confidence reported is sufficient for this type of report.* • *Statements of local nature including geology, topography, geotechnical, physical conditions, social needs and other relevant data inputs.* • *At this stage the statement is considered to be relatively accurate with good confidence due to the qualitative and quantitative examination conducted by Competen Person* • *Historical comparisons of production data are not made in the production of this report.*

APPENDIX B — 2019 NICKEL, GOLD, SILVER AND BAUXITE RESERVES STATEMENT

Mineral Resources & Ore Reserves Statement

as per December 31st, 2019

NICKEL

BAUXITE

GOLD

EXECUTIVE SUMMARY

This statement is the update of the mineral resources and ore reserves as per December 31st, 2019 of PT ANTAM Tbk. (ANTAM) and subsidiaries. The information listed in this statement relates to the Exploration Results, Mineral Resources and Ore Reserves estimated by technical team of ANTAM supervised by Mr. Bronto Sutopo, a member of The Australasian Institute of Mining and Metallurgy (MAusIMM) and certified as Competent Person Indonesia (CPI).

ANTAM is a vertically integrated, export-oriented, diversified mining and metals company. With operations spread throughout the mineral-rich Indonesian archipelago, ANTAM undertakes all activities from exploration, excavation, processing through to marketing of nickel ore, ferronickel, gold, silver, and bauxite. All of Mineral Resources and Ore Reserves are located in Indonesia and have received legal mining permit from Indonesian Government.

ANTAM is pleased to announce new estimates of Mineral Resources and Ore Reserves as per December 31st, 2019 stated in million tonnes as wet (wmt) and dry (dmt) basis. The Mineral Resources and Ore Reserves are reported in accordance with the Joint Ore Reserve Committee (JORC) Code 2012 / KCMI Code 2017. The Mineral Resources and Ore Reserves statement of ANTAM as per December 31st, 2019 are:

Commodity	Millions Tonnes (Wet)	Millions Tonnes (Dry)	Ni (%)	Al2O3 (%)	Au (koz)
Nickel					
Total Resources	1,035.48	734.78	1.65		
Total Reserves	297.23	213.32	1.72		
Bauxite					
Total Resources	277.30	236.07		45.09	
Total Reserves	118.13	100.41		44.02	
Gold					
Total Resources	8.98	7.63			816
Total Reserves	3.54	3.19			239.2

The changes for both Nickel Mineral Resources and Ore Reserves due to the exploration result and export banned. The changes for both Bauxite Mineral Resources and Ore Reserves due to utilization of bauxite resources for smelter grade alumina refinery (SGAR) plant in Mempawah. The changes for both Gold Mineral Resources and Ore Reserves are due to mining production in 2019 and further evaluation of block model data.

The Mineral Resources and Ore Reserves statement of ANTAM's subsidiaries as per December 31st, 2019 are:

Commodity	Millions of Tonnes (Wet)	Millions of Tonnes (Dry)	Ni (%)	Al2O3 (%)	Au (koz)
Nickel					
Total Resources	326.25	229.25	1.69		
Total Reserves	56.51	41.04	1.87		
Bauxite					
Total Resources	320.30	272.86		43.08	
Total Reserves	32.47	27.60		43.57	
Gold					
Total Resources	1.83	1.56			389
Total Reserves	0.29	0.24			30.2

Commodity prices and exchange rates used to estimate the economic viability of Ore Reserves are based on Corporate Long Term Plan 2019-2024 ("Rencana Jangka Panjang Perusahaan" / RJPP 2019-2024) applied at the estimation.

Coordinator of
ANTAM Competent Person Team

Bronto Sutopo

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NICKEL

PT ANTAM Tbk. (ANTAM) has seven nickel mining licenses (IUP) located at South East Sulawesi and North Maluku Province, Indonesia that covers 68,301.5 Ha in total. These IUPs are operation and production IUPs (IUP OP) and we have obtained the relevant Clear and Clean (CnC) certificates from the Government of Indonesia through The Ministry of Energy and Mineral Resources. Table 1 is a list of the nickel IUPs.

Table 1. List of Nickel Mining Licenses

No.	Mining License Number	Location	Name of Concession Area	Coverage Area (Ha)	Validity Period	
					Start	End
1	158 Tahun 2010 (KW 10 APR OP 005)	North Konawe, South East Sulawesi	Asera and Molawe	16,920	29 April 2010	29 April 2030
2	15 Tahun 2010 (KW 99 STP 057.a)	North Konawe, South East Sulawesi	Lasolo	6,213	11 January 2010	27 January 2028
3	188.45/540-170/2011 (KW97PP0443)	East Halmahera, North Maluku	Buli Serani	39,040	27 October 2011	27 October 2040
4	198 Tahun 2010 (WSPM016)	Kolaka, South east Sulawesi	Pomalaa	1,954	25 June 2010	25 June 2020
5	199 Tahun 2010 (WSPM017)	Kolaka, South East Sulawesi	Bt. Kilat	878.2	25 June 2010	25 June 2020
6	188.45/100/2014 (KW.WSPM.015)	Kolaka, South East Sulawesi	Sitallo	584.3	14 March 2014	14 March 2024
7	188.45/099/2014 (KW.WSPM.014)	Kolaka, South East Sulawesi	Tambea	2,712	14 March 2014	14 March 2024

Every IUP has at least one prospect area. IUP Asera and Molawe has two prospects area called Lasolo-Lalindu and Mandiodo. IUP Lasolo has two prospects area called Tapunopaka and Bahubulu. IUP Buli Serani has four prospects area called Sangaji, Mornopo, Tanjung Buli, and Pakal. IUP Pomalaa, Bt. Kilat, Sitallo, and Tambea called prospect Pomalaa. The total prospect area are nine prospects.

The IUP dispute occured in IUP Asera and Molawe. ANTAM owns Asera and Molawe IUP OP since 2010, but in 2012 is revoked and given to several companies by former North Konawe Regent unilaterally. In 2014 the Supreme Court's decision to win ANTAM as a legitimate IUP holder and continue to proceed to obtain a CnC certificate. At the end of 2018 the IUP is declared CnC through certificate of CnC number 1468/Min/12/2018.

Figure 1, 2, & 3 reflect the location of Nickel Mining Permit of PT ANTAM Tbk as per December 31st, 2019.

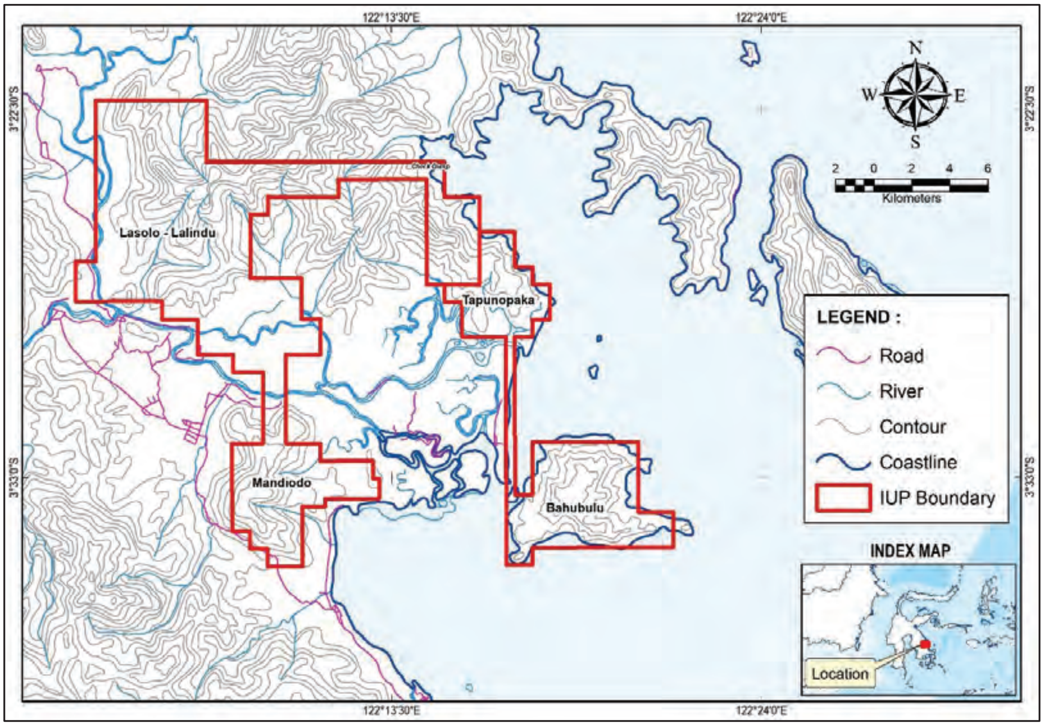

Figure 1. Map of Lalindu-Lasolo, Mandiodo, Tapunopaka and Bahubulu Prospects in North Konawe Regency, South East Sulawesi Province, Indonesia

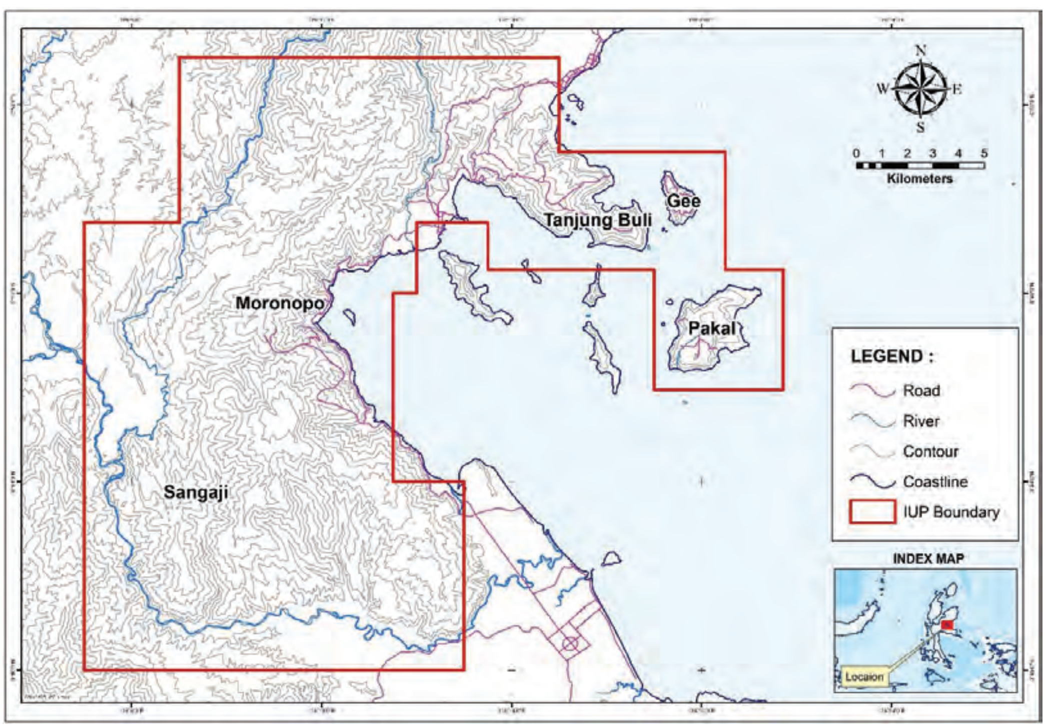

Figure 2. Map of Sangaji, Mornopo, Tanjung Buli, and Pakal Island Prospects in East Halmahera Regency, North Maluku Province, Indonesia

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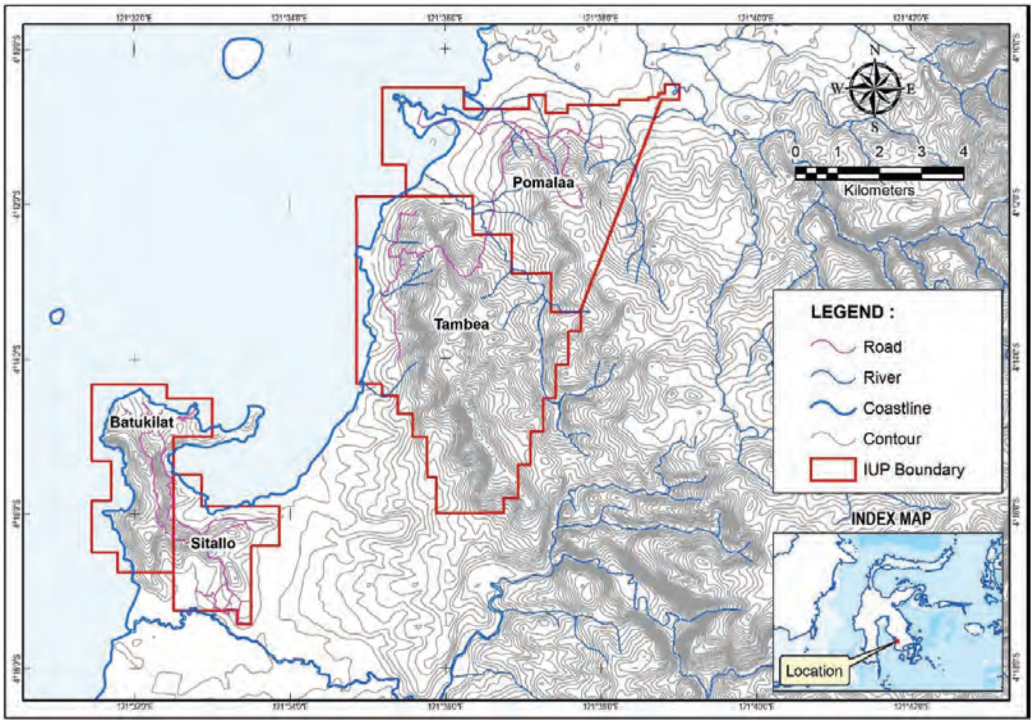

Figure 3. Map of Pomalaa Prospect in Kolaka, South East Sulawesi Province, Indonesia

The information in this report relating to mineral resources and ore reserves estimate are based on information compiled and verified by Mr. M. Riyan Kamil, Mr. Arnazt P. Adryanto, Mr. Febri E. Prihasto, Mr. Aldino Yulianto, who have sufficient experience and are certified as Competent Person Indonesia for lateritic nickel commodity. The lateritic nickel mineral resources and ore reserves of as per December 31st, 2019 are shown in table 2, 3, 4 & 5, all stated in millions of tonnes.

The resource block models were updated based on exploration drilling and the progress of mining by cut-off date of data at November 30th, 2019. Sangaji prospect updated based on exploration drilling. Mornopo and Pomalaa prospects updated based on exploration drilling and mining operation. Tanjung Buli, Pakal, and Tapunopaka prospects updated based on mining operation. Mandiodo prospect updated based on illegal mining area. Bahubulu and Lasolo-Lalindu prospects have not been updated due to no activities at those two prospects. Technical parameters and explanations for resource estimation are stated in Table 1 JORC/KCMI Section 3 Estimation and Reporting of Mineral Resources that made for each prospect in the appendix of this statement.

The conversion from resources into reserve was based on modifying factors as stated in JORC/KCMI Code and only measured and indicated resources that were converted into reserve. The ore supply plan is also changed because there is no export ore starting from 2020. Technical parameters and explanations for reserve estimation are stated in Table 1 JORC/KCMI Section 4 Estimation and Reporting of Ore Reserves that made for each prospect in the appendix of this statement.

Table 2. Nickel Mineral Resources as per December 31st, 2019

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Pakal	Limonit	Measured	17.58	12.83	1.57	40.62	9.59	2.59	0.18
		Indicated	0.61	0.44	1.56	37.85	15.11	3.98	0.22
		Inferred	0.15	0.11	1.57	39.95	14.14	3.84	0.21
	Total Limonit		**18.33**	**13.38**	**1.57**	**40.52**	**9.81**	**2.65**	**0.18**
	Saprolit	Measured	18.47	14.41	2.11	15.43	37.28	21.83	0.05
		Indicated	1.22	0.95	2.04	14.78	39.84	22.63	0.05
		Inferred	0.52	0.41	2.00	14.37	38.45	24.88	0.05
	Total Saprolit		**20.21**	**15.77**	**2.10**	**15.36**	**37.47**	**21.96**	**0.05**

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Tanjung Buli	Limonit	Measured	5.60	3.86	1.51	36.25	17.56	5.32	0.17
		Indicated	2.66	1.84	1.58	37.26	16.21	5.21	0.16
		Inferred	4.30	2.97	1.63	36.14	19.27	5.61	0.16
	Total Limonit		**12.56**	**8.67**	**1.56**	**36.43**	**17.86**	**5.40**	**0.16**
	Saprolit	Measured	11.13	8.57	1.94	12.38	41.42	28.10	0.03
		Indicated	7.78	5.99	1.99	11.16	41.43	29.09	0.03
		Inferred	19.16	14.75	1.97	11.17	41.89	29.95	0.03
	Total Saprolit		**38.06**	**29.31**	**1.96**	**11.52**	**41.66**	**29.24**	**0.03**

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Mornopo	Limonit	Measured	16.23	10.87	1.44	40.19	14.47	3.94	0.18
		Indicated	7.81	5.24	1.43	37.74	16.87	5.26	0.16
		Inferred	-	-	-	-	-	-	-
	Total Limonit		**24.04**	**16.11**	**1.44**	**39.39**	**15.25**	**4.37**	**0.18**
	Saprolit	Measured	45.11	33.83	2.03	10.64	42.59	27.99	0.03
		Indicated	22.33	16.75	1.98	10.96	43.00	27.16	0.03
		Inferred	0.06	0.04	1.92	10.59	40.06	28.28	0.03
	Total Saprolit		**67.50**	**50.63**	**2.02**	**10.75**	**42.72**	**27.71**	**0.03**

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Sangaji	Limonit	Measured	13.15	9.34	1.32	41.99	12.75	2.11	0.16
		Indicated	26.42	18.75	1.33	42.82	11.75	2.41	0.16
		Inferred	33.53	23.77	1.36	41.92	11.57	2.93	0.18
	Total Limonit		**73.09**	**51.86**	**1.34**	**42.26**	**11.85**	**2.59**	**0.17**
	Saprolit	Measured	33.93	25.11	1.81	11.55	41.31	27.77	0.03
		Indicated	95.01	70.32	1.81	11.97	41.11	27.29	0.03
		Inferred	141.72	105.12	1.84	12.64	40.69	27.42	0.04
	Total Saprolit		**270.66**	**200.55**	**1.82**	**12.27**	**40.91**	**27.42**	**0.04**

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Pomalaa	Limonit	Measured	5.47	3.72	1.41	39.19	16.56	2.85	0.13
		Indicated	11.81	8.03	1.39	38.96	16.07	2.88	0.13
		Inferred	9.62	6.54	1.40	26.91	20.49	3.05	0.10
	Total Limonit		**26.91**	**18.30**	**1.40**	**34.70**	**17.75**	**2.93**	**0.12**
	Saprolit	Measured	12.79	9.47	1.93	13.83	42.72	18.96	0.03
		Indicated	22.23	16.45	1.79	13.14	42.43	19.95	0.03
		Inferred	11.47	8.48	1.75	12.39	42.61	21.38	0.03
	Total Saprolit		**46.49**	**34.40**	**1.82**	**13.15**	**42.55**	**20.03**	**0.03**

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Lasolo Lalindu	Limonit	Measured	0.66	0.43	1.45	38.45	14.10	3.46	0.14
		Indicated	15.69	10.20	1.40	36.98	14.93	3.95	0.10
		Inferred	4.17	2.71	1.39	40.13	13.50	3.81	0.12
	Total Limonit		**20.53**	**13.34**	**1.40**	**37.67**	**14.61**	**3.91**	**0.11**
	Saprolit	Measured	0.35	0.25	1.79	14.80	37.69	21.45	0.03
		Indicated	7.38	5.17	1.76	14.44	37.41	23.27	0.04
		Inferred	3.36	2.35	1.70	14.47	35.87	23.14	0.03
	Total Saprolit		**11.10**	**7.77**	**1.75**	**14.46**	**36.95**	**23.17**	**0.03**

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Tapunopaka	Limonit	Measured	45.76	29.75	1.32	41.95	10.17	2.71	0.14
		Indicated	27.56	17.91	1.31	40.57	11.81	3.80	0.11
		Inferred	12.10	7.87	1.33	40.01	12.27	3.78	0.14
	Total Limonit		**85.42**	**55.53**	**1.32**	**41.23**	**11.00**	**3.21**	**0.13**
	Saprolit	Measured	17.80	12.46	1.69	14.50	36.97	19.55	0.04
		Indicated	13.67	9.57	1.59	14.55	36.97	19.13	0.04
		Inferred	10.05	7.03	1.47	14.14	37.49	20.60	0.04
	Total Saprolit		**41.51**	**29.06**	**1.60**	**14.43**	**37.09**	**19.66**	**0.04**

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Bahubulu	Limonit	Measured	7.56	4.92	1.43	38.71	12.48	4.53	0.14
		Indicated	37.79	24.57	1.42	36.16	13.71	7.23	0.07
		Inferred	32.71	21.26	1.37	32.86	19.30	8.92	0.07
	Total Limonit		**78.06**	**50.74**	**1.40**	**35.02**	**15.93**	**7.68**	**0.08**
	Saprolit	Measured	13.09	9.16	1.70	13.51	39.83	19.62	0.04
		Indicated	46.74	32.72	1.64	14.98	37.80	17.60	0.03
		Inferred	82.82	57.97	1.51	14.96	38.34	17.32	0.04
	Total Saprolit		**142.64**	**99.85**	**1.57**	**14.83**	**38.30**	**17.63**	**0.04**

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Mandiodo	Limonit	Measured	16.05	10.43	1.41	44.22	8.72	1.95	0.15
		Indicated	5.41	3.52	1.39	43.10	9.12	1.82	0.16
		Inferred	4.86	3.16	1.38	43.58	8.70	1.85	0.15
	Total Limonit		**26.33**	**17.11**	**1.40**	**43.87**	**8.80**	**1.90**	**0.15**
	Saprolit	Measured	9.18	6.43	1.72	22.23	30.88	16.45	0.06
		Indicated	5.48	3.84	1.77	20.36	33.20	16.88	0.05
		Inferred	17.37	12.16	1.84	17.25	33.54	19.23	0.04
	Total Saprolit		**32.03**	**22.42**	**1.79**	**19.21**	**32.72**	**18.03**	**0.05**

Table 3. Total Nickel Mineral Resources in ANTAM as per December 31st, 2019

Area	ZONE	CLASS	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Total Nickel Resources of ANTAM	Limonit	Measured	128.07	86.15	1.40	41.26	11.47	2.92	0.16
		Indicated	135.77	90.50	1.38	39.09	13.34	4.46	0.12
		Inferred	101.44	68.39	1.38	37.10	15.26	5.07	0.13
	Total Limonit		**365.28**	**245.04**	**1.38**	**39.30**	**13.22**	**4.09**	**0.13**
	Saprolit	Measured	161.85	119.67	1.90	13.07	40.13	24.26	0.04
		Indicated	221.84	161.75	1.78	13.05	40.17	23.64	0.03
		Inferred	286.53	208.32	1.73	13.56	39.56	23.64	0.04
	Total Saprolit		**670.21**	**489.75**	**1.79**	**13.27**	**39.90**	**23.79**	**0.04**

Table 4. Nickel Ore Reserves as per December 31st, 2019

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Pakal	Limonite	Proved	7.22	5.27	1.68	39.52	9.96	2.75	0.18
		Probable	-	-	-	-	-	-	-
	Total Limonite		**7.22**	**5.27**	**1.68**	**39.52**	**9.96**	**2.75**	**0.18**
	Saprolite	Proved	12.66	9.87	2.04	15.60	36.75	21.89	0.05
		Probable	0.25	0.19	2.03	14.02	43.38	24.78	0.05
	Total Saprolite		**12.90**	**10.06**	**2.04**	**15.57**	**36.87**	**21.94**	**0.05**

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Tanjung Buli	Limonite	Proved	1.79	1.24	1.68	36.64	16.92	5.57	0.19
		Probable	0.55	0.38	1.80	38.53	14.49	5.17	0.19
	Total Limonite		**2.34**	**1.62**	**1.71**	**37.09**	**16.35**	**5.48**	**0.19**
	Saprolite	Proved	7.75	5.97	1.93	12.31	41.53	28.35	0.03
		Probable	3.07	2.36	1.90	11.98	41.24	28.60	0.03
	Total Saprolite		**10.81**	**8.33**	**1.92**	**12.22**	**41.45**	**28.42**	**0.03**

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Moronopo	Limonite	Proved	3.61	2.42	1.65	38.85	15.85	5.14	0.19
		Probable	2.28	1.53	1.67	35.89	19.90	7.11	0.14
	Total Limonite		**5.89**	**3.95**	**1.66**	**37.71**	**17.42**	**5.90**	**0.17**
	Saprolite	Proved	32.78	24.58	2.00	10.61	42.26	28.08	0.03
		Probable	23.51	17.63	1.94	11.14	43.71	27.45	0.02
	Total Saprolite		**56.28**	**42.21**	**1.97**	**10.83**	**42.87**	**27.82**	**0.03**

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Sangaji	Limonite	Proved	0.40	0.28	1.59	39.82	15.08	2.85	0.16
		Probable	1.58	1.11	1.57	41.21	13.66	2.93	0.16
	Total Limonite		**1.98**	**1.39**	**1.57**	**40.93**	**13.95**	**2.91**	**0.16**
	Saprolite	Proved	21.60	16.42	1.77	11.57	41.33	27.63	0.03
		Probable	77.57	58.96	1.77	11.67	41.24	27.82	0.03
	Total Saprolite		**99.18**	**75.37**	**1.77**	**11.65**	**41.26**	**27.78**	**0.03**

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Pomalaa	Limonite	Proved	0.22	0.15	1.90	37.26	19.18	4.51	0.13
		Probable	0.22	0.15	1.86	35.11	13.93	3.52	0.13
	Total Limonite		**0.44**	**0.30**	**1.88**	**36.17**	**16.52**	**4.01**	**0.13**
	Saprolite	Proved	5.47	4.05	2.12	14.32	42.20	18.76	0.03
		Probable	7.83	5.80	2.01	13.10	42.25	19.97	0.03
	Total Saprolite		**13.31**	**9.85**	**2.05**	**13.60**	**42.23**	**19.47**	**0.03**

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Tapunopaka	Limonite	Proved	40.88	26.57	1.29	41.98	10.16	2.70	0.14
		Probable	22.16	14.41	1.29	40.89	11.47	3.53	0.12
	Total Limonite		**63.04**	**40.98**	**1.29**	**41.60**	**10.62**	**2.99**	**0.13**

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Bahubulu	Limonite	Proved	-	-	-	-	-	-	-
		Probable	9.03	5.87	1.45	36.80	8.47	4.90	0.08
	Total Limonite		**9.03**	**5.87**	**1.45**	**36.80**	**8.47**	**4.90**	**0.08**
	Saprolite	Proved	-	-	-	-	-	-	-
		Probable	14.79	10.36	1.85	15.29	37.13	18.00	0.04
	Total Saprolite		**14.79**	**10.36**	**1.85**	**15.29**	**37.13**	**18.00**	**0.04**

Table 5. Total Nickel Ore Reserves in ANTAM as per December 31st, 2019

Area	ZONE	CLASS	Million of Tonnes (WMT)	Million of Tonnes (DMT)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Total Nickel Reserves of ANTAM	Limonite	Proved	54.11	35.92	1.38	41.23	10.81	2.97	0.15
		Probable	35.84	23.45	1.38	39.48	11.41	4.10	0.11
	Total Limonite		**89.95**	**59.37**	**1.38**	**40.54**	**11.05**	**3.42**	**0.14**
	Saprolite	Proved	80.26	60.89	1.94	12.07	41.07	26.37	0.04
		Probable	127.02	95.29	1.83	12.10	41.28	26.14	0.03
	Total Saprolite		**207.28**	**156.18**	**1.87**	**12.09**	**41.20**	**26.23**	**0.03**

The measured and indicated mineral resources are reported inclusive of those mineral resources modified to produce the ore reserves.

BAUXITE

PT ANTAM Tbk. (ANTAM) has three bauxite mining licenses (IUP) located at West Kalimantan Province, Indonesia that covers 67,700 Ha in total. These IUPs are operation and production IUPs (IUP OP) and we have obtained Clear and Clean (CnC) certificates from the Government of Indonesia through the Ministry of Energy and Mineral Resources. Table 6 is a list of the bauxite IUPs.

Table 6. List of Bauxite Mining Licenses

No.	Mining License Number	Location	Name of Concession Area	Coverage Area (Ha)	Validity Period	
					Start	End
1	15/Distamben/2015 (KW 98PPO183)	Sanggau, West Kalimantan	Tayan	34,360	02 January 2015	04 January 2030
2	221 Tahun 2009	Pontianak, West Kalimantan	Toho/Mempawah	12,630	15 November 2009	01 July 2028
3	544.11/330/HK-2014	Landak, West Kalimantan	Mempawah Hulu	20,710	16 December 2014	16 December 2034

Every IUP has at least one prospect block. IUP Tayan has six prospects area called Block A, Block B, Block C, Block D, Block E, and Block Munggu Pasir. IUP Mempawah is called Block Toho. IUP Mempawah Hulu is called Block Landak. The total prospect block are eight blocks.

Figure 4 & 5 reflect the location of Bauxite Mining Permit of PT ANTAM Tbk as per December 31st, 2019.

The information in this report relating to the ANTAM bauxite mineral resources and ore reserves estimation is based on information prepared, compiled and verified by Mr. Dedi Sunjaya, Mr. Tulus Semedie, Mr. Arif Hindarto, and Mrs. Tafia Sulistyani P. who have sufficient experience and are certified as Competent Person Indonesia for lateritic bauxite commodity.

Lateritic bauxite resources estimation of ANTAM as per December, 31st 2019 is shown in Table 7. Technical parameters and explanations for resource estimation are stated in Table 1 JORC/KCMI Section 3 Estimation and Reporting of Mineral Resources that made for each prospect in the appendix of this statement.

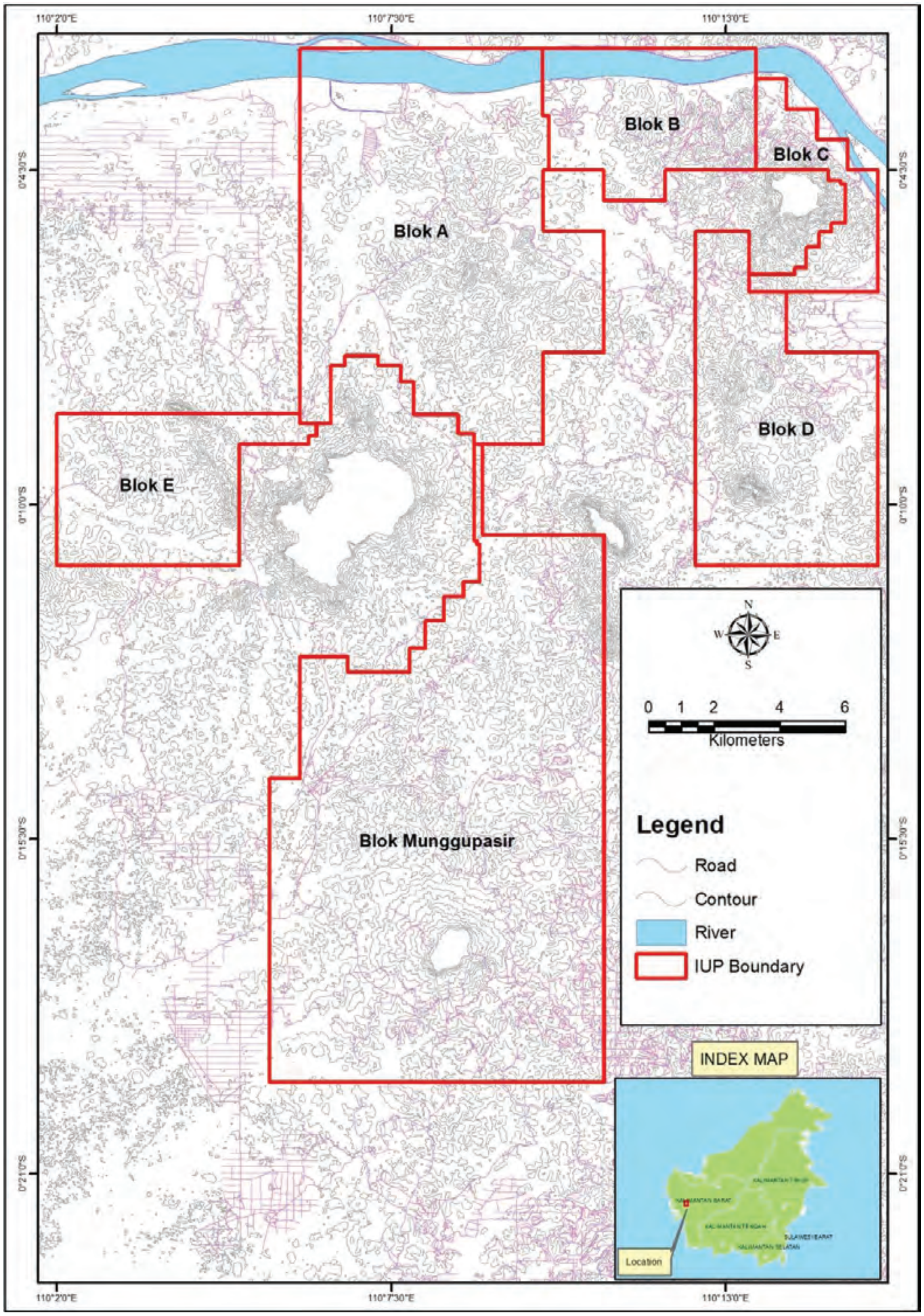

Figure 4. Map of Tayan Mining Area (Block Munggu Pasir, Block A, B, C, D, and E) in Sanggau Regency, West Kalimantan Province, Indonesia

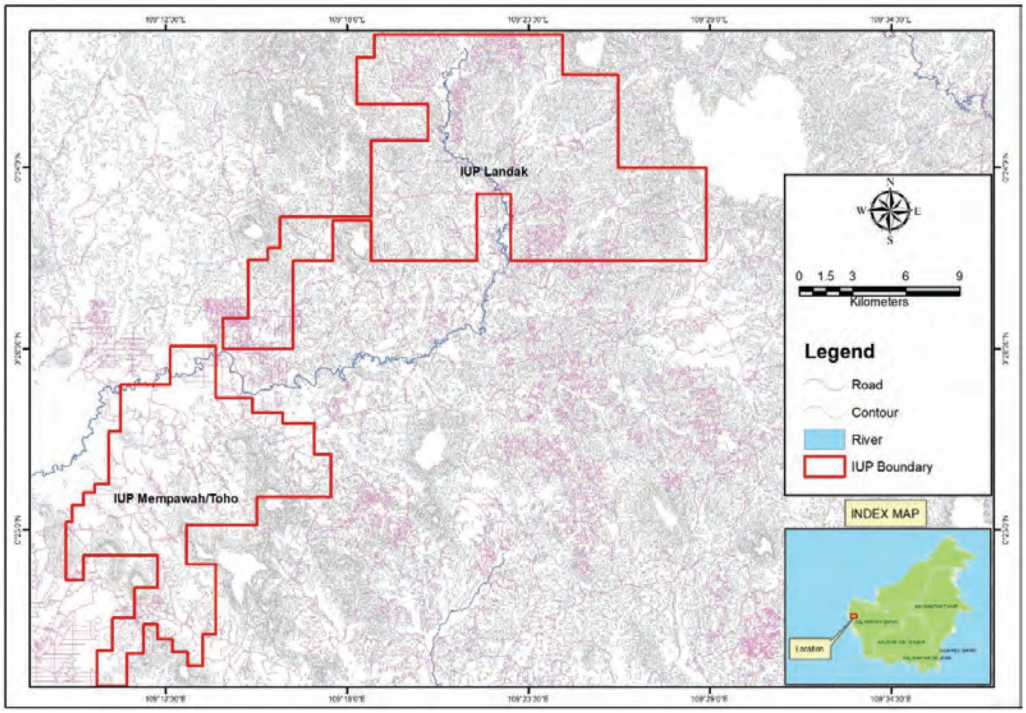

Figure 5. Map of Mempawah (Toho) and Mempawah Hulu (Landak) Mining Area in West Kalimantan Province, Indonesia

Table 7. Bauxite Mineral Resources as per December 31st, 2019

Area/IUP	Prospect	Resource CLASS	Washed Bauxite		CF (%)	Average Grade (%)				
			Million of Tonnes (wmt)	Million of Tonnes (dmt)		Al2O3	R-SiO2	T-SiO2	Fe2O3	TiO2
Tayan	Block AB	Measured	38.48	32.90	52.42	47.83	3.23	14.58	11.76	0.85
		Indicated	31.10	26.59	52.14	46.75	4.11	15.48	12.42	0.89
		Inferred	4.09	3.50	50.76	45.38	5.30	18.43	12.13	0.82
		Total	**73.67**	**62.99**	**52.21**	**47.24**	**3.72**	**15.17**	**12.06**	**0.87**
	Block CDE	Measured	6.34	5.39	54.38	45.25	3.27	16.14	12.72	1.12
		Indicated	12.62	10.72	51.57	45.19	3.65	18.52	12.45	0.96
		Inferred	3.38	2.87	47.44	44.95	3.84	21.94	10.34	0.78
		Total	**22.33**	**18.98**	**51.65**	**45.17**	**3.57**	**18.36**	**12.21**	**0.98**
	Block Munggu Pasir	Measured	44.63	37.93	53.92	47.17	2.58	9.85	15.87	1.11
		Indicated	15.62	13.27	53.89	46.42	2.99	10.17	16.37	1.19
		Inferred	10.68	9.07	51.52	46.07	3.65	14.46	13.38	0.92
		Total	**70.92**	**60.28**	**53.54**	**46.84**	**2.83**	**10.61**	**15.61**	**1.10**
Grand Total Resources of Tayan IUP			**166.92**	**142.25**	**52.70**	**46.79**	**3.32**	**13.66**	**13.58**	**0.98**

Area/IUP	Prospect	Resource CLASS	Washed Bauxite		CF (%)	Average Grade (%)				
			Million of Tonnes (WMT)	Million of Tonnes (DMT)		Al2O3	R-SiO2	T-SiO2	Fe2O3	TiO2
Mempawah	**Toho**	Measured	16.21	13.78	48.19	44.34	2.68	1.91	18.79	13.01
		Indicated	6.63	5.63	48.77	42.19	3.04	2.16	17.55	16.13
		Inferred	8.98	7.64	47.85	41.42	3.09	2.20	19.01	16.10
		Total	**31.82**	**27.04**	**48.21**	**43.06**	**2.87**	**2.04**	**18.60**	**14.53**
Landak	**Mempawah Hulu**	Measured	64.87	55.14	48.41	42.26	3.91	26.42	8.86	0.70
		Indicated	8.73	7.42	49.25	41.93	4.17	26.89	8.87	0.65
		Inferred	4.95	4.21	49.31	43.57	3.84	25.14	8.56	0.57
		Total	**78.56**	**66.78**	**48.56**	**42.31**	**3.94**	**26.39**	**8.84**	**0.68**
Total Bauxite Resources of ANTAM		Measured	170.53	145.14	50.96	45.11	3.27	16.70	12.43	2.03
		Indicated	74.69	63.64	51.77	45.45	3.71	15.04	13.29	2.29
		Inferred	32.08	27.29	49.62	44.17	3.75	13.97	13.73	5.09
		Total	**277.30**	**236.07**	**51.01**	**45.09**	**3.44**	**15.94**	**12.82**	**2.45**

Table 7 as above contains details of bauxite resources that have reasonable prospect to be economically extracted in the future. This material is defined as Mineral Resources under the JORC Code 2012 and KCMI Code 2017. The resource block models were updated based on exploration test pit and mining operation in Tayan, and exploration test pit in Mempawah during year of 2019.

Measured and indicated mineral resources of Tayan Block A is processed so that it is able to be exported as bauxite ore until year of 2021 and it provides long term ore supply to the Indonesia Chemical Alumina (ICA) Plant in Tayan until year of 2063 (50 years operation of ICA Plant since it started on the year of 2014).

Measured and indicated mineral resources of ANTAM's IUP in Mempawah and Landak is processed and provides long term ore supply of SGAR Plant in Mempawah until year of 2051 (30 years operation of SGAR Plant).

In the conversion processes from resources into reserves factors such as mining (including recovery and dillution), metallurgical, economic, marketing, legal, environmental, infrastructures, social, and governance have been taken into consideration. Lateritic bauxite ore reserves estimation of ANTAM as per December 31st, 2019 is shown in Table 8.

Table 8. Bauxite Ore Reserves as per December 31st, 2019

Area/IUP	Prospect	Reserve CLASS	Washed Bauxite		CF (%)	Average Grade (%)				
			Million of Tonnes (wmt)	Million of Tonnes (dmt)		AL2O3	R-SIO2	T-SIO2	FE2O3	TIO2
ANTAM Tayan	Block A	Proved	6.79	5.77	55.36	48.54	3.10	11.61	13.24	0.95
		Probable	32.28	27.44	53.66	48.08	3.56	13.27	12.58	0.89
		Total	**39.07**	**33.21**	**53.95**	**48.16**	**3.48**	**12.98**	**12.70**	**0.90**
ANTAM Mempawah	Toho	Proved	11.25	9.56	49.49	44.49	3.02	18.06	13.34	0.92
		Probable	4.26	3.62	50.23	41.91	3.56	17.16	16.62	1.06
		Total	**15.51**	**13.18**	**49.69**	**43.78**	**3.17**	**17.82**	**14.24**	**0.96**
ANTAM Landak	Mempawah Hulu	Proved	9.71	8.25	49.36	41.41	4.31	28.13	8.09	0.65
		Probable	53.84	45.77	48.00	41.55	4.63	27.52	9.00	0.70
		Total	**63.55**	**54.02**	**48.20**	**41.52**	**4.58**	**27.61**	**8.86**	**0.69**
Total Bauxite Reserves of ANTAM		Proved	27.75	23.58	50.88	44.41	3.49	20.00	11.48	0.83
		Probable	90.38	76.82	50.12	43.90	4.20	21.94	10.64	0.79
		Grand Total	**118.13**	**100.41**	**50.30**	**44.02**	**4.03**	**21.49**	**10.83**	**0.80**

The measured and indicated mineral resources are reported inclusive of those mineral resources modified to produce the ore reserves.

While others bauxite area and prospect such as block CDE and block Munggu Pasir of Tayan IUP will be converted into ore reserves when there is an increase of sales volume and/or the feasibility study of new alumina refinery plant has been completed to accommodate the utilization of abundance bauxite resources in ANTAM mining concessions.

Technical parameters and explanations for reserve estimation are stated in Table 1 JORC/KCMI Section 4 Estimation and Reporting of Ore Reserves that made for each prospect in the appendix of this statement.

GOLD

PT ANTAM Tbk. (ANTAM) has two gold mining licenses (IUP) located at West Java Province, Indonesia that covers 10,560 Ha in total. The status of those IUPs are operation and production IUPs (IUP OP) and we have obtained the relevant Clear and Clean (CnC) certificates from the Government of Indonesia through the Ministry of Energy and Mineral Resources. Table 9 is a list of the gold IUPs.

Table 9. List of Gold Mining Licenses

No.	Mining License Number	Location	Name of Concession Area	Coverage Area (Ha)	Validity Period	
					Start	End
1	541.2/005/kpts/ESDM/2010	Bogor, West Java	Pongkor	6,047	09 March 1991	09 March 2021
2	256/1/IUP/PMDN/2019	Garut, West Java	Papandayan	4,513	10 July 2019	14 November 2027

Figure 6 & 7 reflect the location of Gold Mining Permit of PT ANTAM Tbk as per December 31st, 2019.

The information in this report relating to mineral resources and ore reserves estimate are based on information compiled by Mr. Andi Kurniawan, Mr. Dwi Margianto, Mr. Halley Rionanda, Mr. Ahmad Raymond, Mrs. Novi Rusiana Dewi, Ms. Okta Christal S, Mr. Emeralda Saentya.

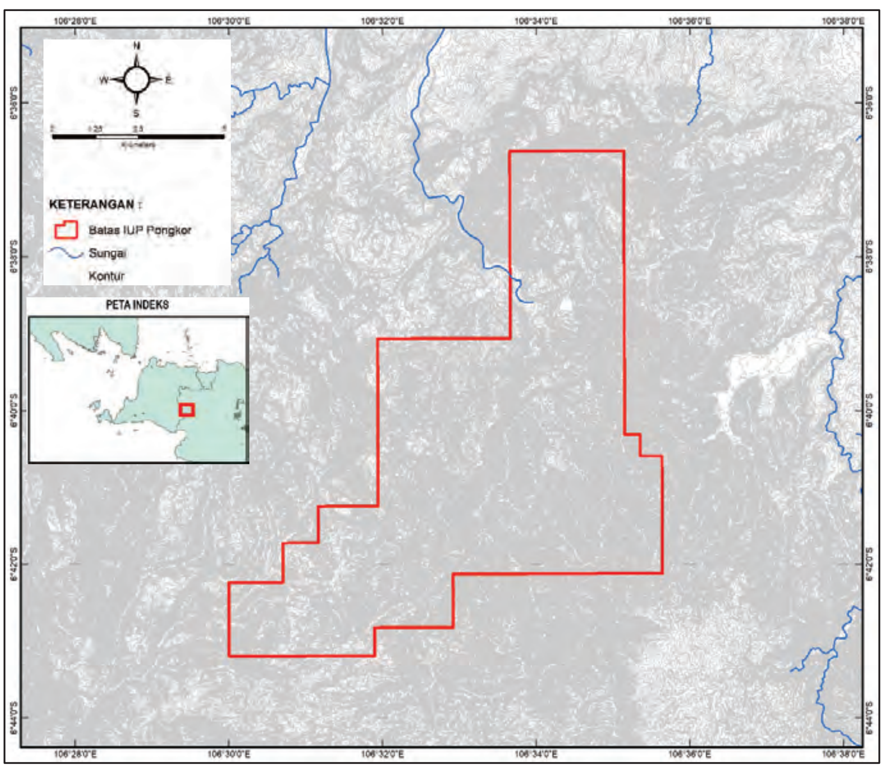

Figure 6. Map of Pongkor Mining Area in West Java Province, Indonesia

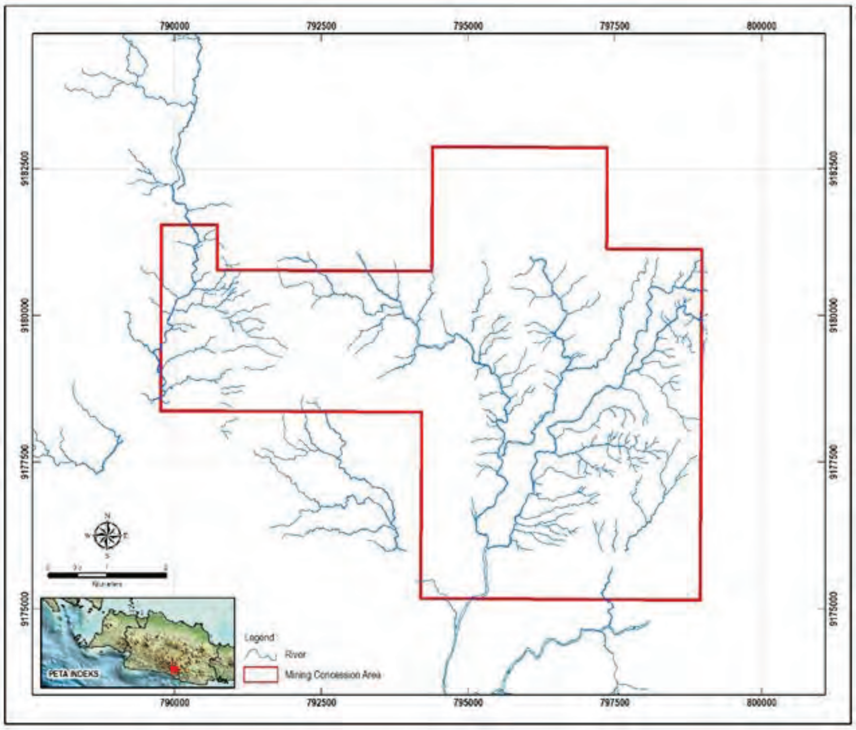

Figure 7. Map of Papandayan mining area in West Java Province, Indonesia

The gold resources and reserves are presented in accordance with the JORC Code 2012 and KCMI Code 2017. Gold Reserves and Gold Resources have been estimated for potentially mineable veins within Mining Permit and limited by major geological and economic constraints.

Mineral resources and ore reserves of gold as per December 31st, 2019 are shown in Table 10 to 13, all stated in thousand ounces of contained metal. Gold commodity depletes due to production during 2019 and the update of block model. Technical parameters and explanations for resource and reserve estimation are stated in Table 1 JORC/KCMI Section 3 Estimation and Reporting of Mineral Resources and Table 1 JORC/KCMI Section 4 Estimation and Reporting of Ore Reserves that made for each prospect in the appendix of this statement.

Table 10. Pongkor Gold Mineral Resources as per December 31st, 2019

Location	Resources Classification	Ore Tonnage (K Wmt)	Ore Tonnage (K Dmt)	Grade		Contained Metal	
				Au (g/t)	Ag (g/t)	Au (koz)	Ag (koz)
Pongkor	Measured	1,885	1,602	5.60	66	288.7	3,394
	Indicated	1,526	1,297	4.60	45	191.7	1,893
	Inferred	190	162	3.77	49	19.6	253
	TOTAL	**3,601**	**3,061**	**5.08**	**56**	**500.0**	**5,541**

Table 11. Papandayan Gold Mineral Resources as per December 31st, 2019

Location	Resources Classification	Ore Tonnage (K Wmt)	Ore Tonnage (K Dmt)	Grade		Contained Metal	
				Au (g/t)	Ag (g/t)	Au (koz)	Ag (koz)
Papandayan	Measured	2,920	2,482	2.22	35	177.0	2,793
	Indicated	1,970	1,675	2.00	31	113.0	1,669
	Inferred	485	412	2.00	27	26.0	358
	TOTAL	**5,375**	**4,569**	**2.16**	**33**	**316.0**	**4,820**

Table 12. Pongkor Gold Ore Reserves as per December 31st, 2019

Location	Reserve Classification	Ore Tonnage (K Wmt)	Ore Tonnage (K dmt)	Grade		Contained Metal	
				Au (g/t)	Ag (g/t)	Au (koz)	Ag (koz)
Pongkor	Proved	373	317	4.77	60	39.5	321
	Probable	6	5	2.49	25	0.3	2
Total Reserves		**380**	**323**	**4.73**	**59**	**39.8**	**323**

Table 13. Papandayan Gold Ore Reserves as per December 31st, 2019

Location	Reserves Classification	Ore Tonnage (K wmt)	Ore Tonnage (K dmt)	Grade		Contained Metal	
				Au (g/t)	Ag (g/t)	Au (koz)	Ag (koz)
Papandayan	Probable	3,161	2,873	2.42	39	199.4	3,020
Total Reserves		**3,161**	**2,873**	**2.42**	**39**	**199.4**	**3,020**

The measured and indicated mineral resources are reported inclusive of those mineral resources modified to produce the ore reserves.

MINERAL RESOURCES & ORE RESERVES OF PT ANTAM Tbk SUBSIDIARIES

1. PT GAG NIKEL

ANTAM owns PT Gag Nikel (owned 100% indirect ownership share) which has a Contract of Work (CoW) in Gag Island, Raja Ampat Regency, West Papua Province, Indonesia. The location of CoW area is shown in Figure 8 and Table 14 for the information of CoW.

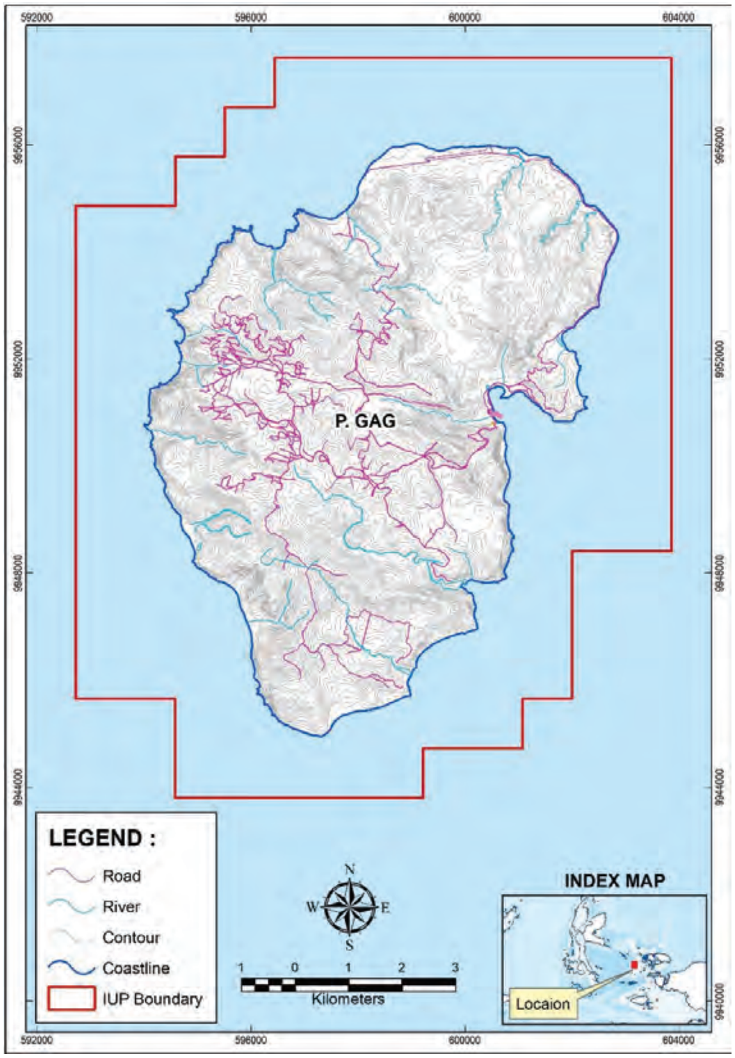

Figure 8. Map of PT Gag Nikel Mining Area in West Papua Province, Indonesia

Table 14. PT Gag Nikel Contract of Work

No.	Contract of Work Number	Location	Name of Concession Area	Coverage Area (Ha)	Validity Period	
					Start	End
1	735.k/20.01/DJP/1998	Raja Ampat Island, West Papua	PT Gag Nikel	13,136	19 January 1998	19 January 2031

The information in this report relating to mineral resources and ore reserves estimate are based on information compiled and being verified by Mr. Arnazt P. Adryanto, Mr. Febri E. Prihasto, Mr. Aldino Yulianto, who have experience and are certified as Competent Person Indonesia for lateritic nickel commodity. PT Gag mineral resources and ore reserves of nickel laterite as per December 31st, 2019 are shown in Table 15 & 16, all stated in million tonnes (wet and dry basis). Technical parameters and explanations for resource estimation are stated in Table 1 JORC/KCMI Section 3 Estimation and Reporting of Mineral Resources and Table 1 JORC/KCMI Section 4 Estimation and Reporting of Ore Reserves in the appendix of this statement.

Table 15. Nickel Mineral Resources of PT Gag Nikel as per December 31st, 2019

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Gag	Limonit	Measured	8.68	5.73	1.45	42.97	9.52	2.17	0.16
		Indicated	28.46	18.78	1.42	42.59	11.05	1.67	0.15
		Inferred	115.02	75.91	1.47	40.37	11.57	1.72	0.15
	Total Limonite		**152.16**	**100.42**	**1.46**	**40.93**	**11.35**	**1.73**	**0.15**
	Saprolit	Measured	11.48	8.50	2.02	16.46	36.42	19.41	0.05
		Indicated	41.59	30.78	1.97	15.47	38.90	21.69	0.04
		Inferred	121.02	89.55	1.87	16.16	37.85	21.04	0.04
	Total Saprolite		**174.09**	**128.83**	**1.90**	**16.01**	**38.01**	**21.08**	**0.04**

Table 16. Nickel Ore Reserve of PT Gag Nikel as per December 31st, 2019

Area	Zone	Class	Million of Tonnes (wmt)	Million of Tonnes (dmt)	Ni (%)	Fe (%)	SiO2 (%)	MgO (%)	Co (%)
Gag	Limonite	Proved	2.04	1.35	1.63	41.41	10.37	3.04	0.17
		Probable	7.63	5.04	1.61	41.24	11.35	2.12	0.17
	Total Limonite		**9.67**	**6.38**	**1.62**	**41.28**	**11.15**	**2.31**	**0.17**
	Saprolite	Proved	7.49	5.55	1.94	16.43	36.29	19.09	0.05
		Probable	39.34	29.11	1.92	15.54	38.80	21.72	0.04
	Total Saprolite		**46.84**	**34.66**	**1.92**	**15.68**	**38.40**	**21.30**	**0.04**

The measured and indicated mineral resources are reported inclusive of those mineral resources modified to produce the ore reserves.

2. PT BORNEO EDO INTERNATIONAL, PT MEGA CITRA UTAMA, PT DWI MITRA ENGGANG KHATULISTIWA AND PT GUNUNG KENDAIK

ANTAM owns several bauxite mining subsidiaries that are holding bauxite mining licenses in West Kalimantan Province, as the following lists:

- PT Borneo Edo International (PT BEI) in Landak Regency.
- PT Mega Citra Utama (PT MCU) in Sanggau Regency.
- PT Dwimitra Enggang Khatulistiwa (PT DEK) in Landak Regency.
- PT Gunung Kendaik (PT. GK) in Landak Regency.

The mining licenses of subsidiaries are shown in Table 17 and Figures 9 & 10.

Table 17. PT BEI, PT MCU, PT DEK, PT GK Mining Licenses

No.	Mining License Number	Location	Name of Concession Area	Coverage Area (Ha)	Validity Period	
					Start	End
1	544.11/98/HK-2013	Landak, West Kalimantan	Menjalin (PT BEI)	18,630	22 April 2013	22 April 2033
2	544.11/264/HK-2014	Landak, West Kalimantan	Sebadu (PT BEI)	19,090	16 September 2014	16 September 2034
3	444 tahun 2009	Sanggau, West Kalimantan	Meliau (PT MCU)	10,000	21 December 2009	21 December 2028
4	544.2/213/HK-2010	Landak, West Kalimantan	Menjalin (PT DEK)	4,900	23 September 2010	23 September 2016 (in suspension)
5	573/DISTAMBEN/2015	Landak, West Kalimantan	Mempawah Hulu/Landak (PT GK)	12,184	25 May 2015	25 May 2035

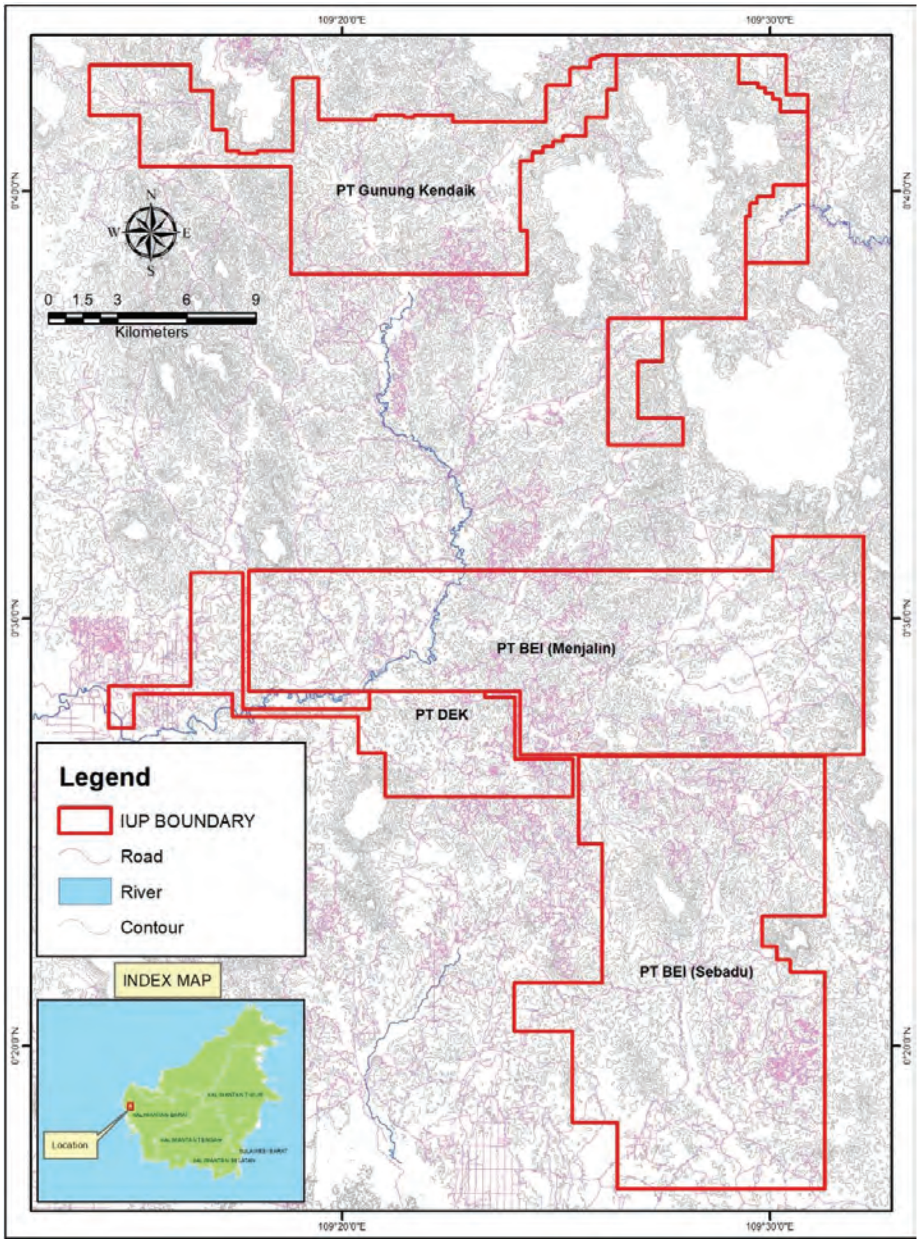

Figure 9. IUP Map of PT BEI, PT DEK and PT GK in Landak Regency

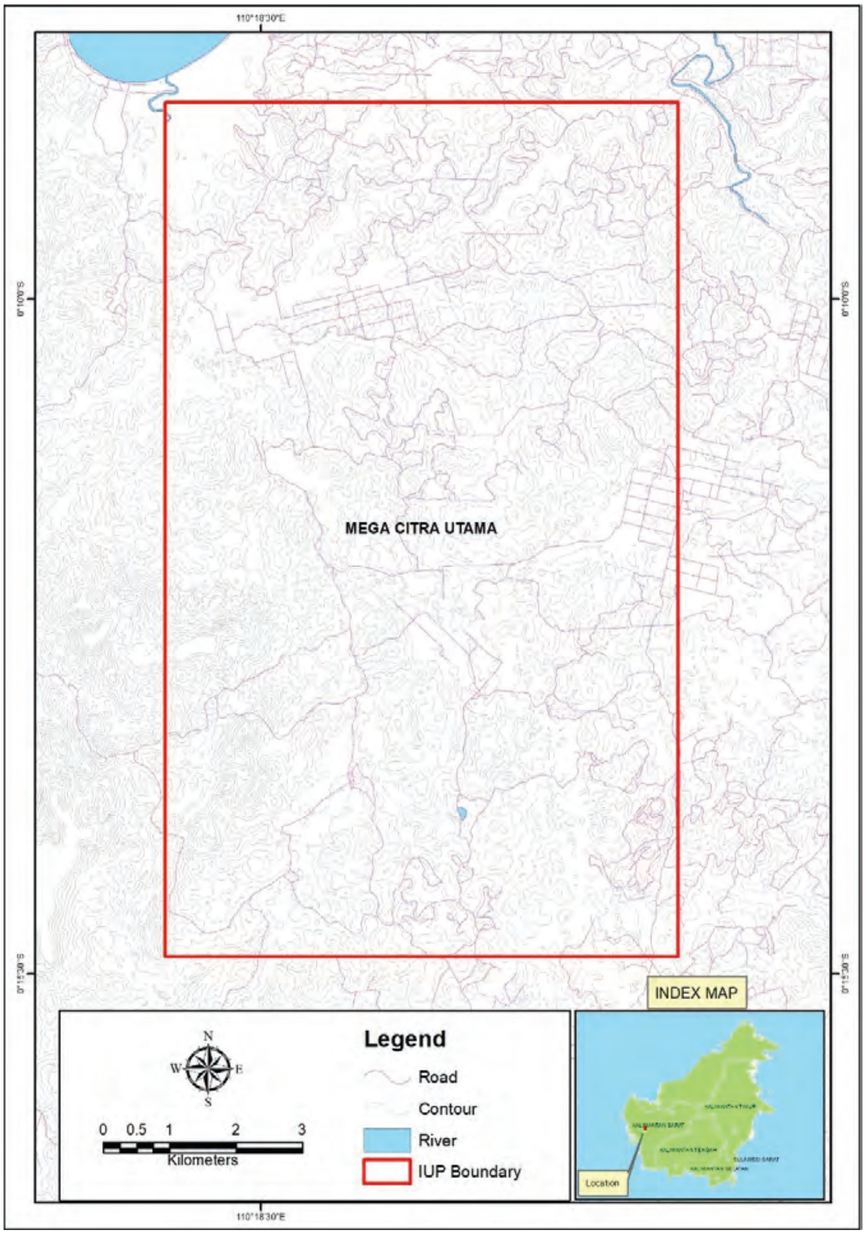

Figure 10. IUP Map of PT MCU in Sanggau Regency

The inferred test pit spacing is 200 m, reduced to 100 m for indicated, then 25-50 m for measured depend on geostatistics consideration on each area to reflect the geological confidence of bauxite resources estimate classification.

ANTAM used block model and geostatistical ordinary kriging method for bauxite resources estimation of PT BEI and PT MCU, while polygonal area of influence method is applied to estimate the bauxite resources of PT DEK and PT GK because they are still in the regional exploration stage.

Technical parameters and explanations for resource estimation are stated in Table 1 JORC/KCMI Section 3 Estimation and Reporting of Mineral Resources and Table 1 JORC/KCMI Section 4

Estimation and Reporting of Ore Reserves that made for each prospect in the appendix of this statement.

The update of mineral resources of PT BEI, PT MCU, PT DEK, and PT GK as per December 31st, 2019 is shown in the Table 18.

Table 18. Bauxite Resources of PT BEI, PT MCU, PT DEK and PT GK as per December 31st, 2019

Area/ IUP ANTAM Subsidiaries	Prospect	Resource CLASS	Washed Bauxite		CF (%)	Average Grade (%)				
			Million of Tonnes (wmt)	Million of Tonnes (dmt)		Al2O3	R-SiO2	T-SiO2	Fe2O3	TiO2
Landak/ PT BEI	Menjalin	Measured	13.01	11.13	50.81	43.75	4.22	20.85	10.86	0.71
		Indicated	12.21	10.44	51.16	43.27	4.27	22.31	10.19	0.66
		Inferred	25.56	21.85	51.29	43.31	4.27	22.11	10.27	0.65
		Total	**50.79**	**43.17**	**51.29**	**43.41**	**4.26**	**21.84**	**10.40**	**0.67**
	Sebadu	Measured	8.72	7.46	51.57	43.33	3.98	23.53	9.79	0.61
		Indicated	4.58	3.92	51.40	44.16	3.99	20.32	11.23	0.66
		Inferred	73.55	62.89	48.60	43.56	4.22	22.57	9.87	0.61
		Total	**86.86**	**73.83**	**48.60**	**43.57**	**4.18**	**22.55**	**9.94**	**0.61**
Sanggau/ PT MCU	Meliau	Measured	31.84	27.06	48.57	42.16	3.96	27.83	7.56	0.61
		Indicated	14.25	12.11	51.60	42.20	3.80	27.60	7.70	0.60
		Inferred	18.26	15.52	52.83	41.96	3.63	28.49	7.71	0.62
		Total	**64.35**	**54.70**	**50.37**	**42.11**	**3.83**	**27.97**	**7.64**	**0.61**
LANDAK/ PT DEK	Menjalin	Measured	1.80	1.53	51.35	44.29	3.84	21.41	10.27	0.74
		Indicated	-	-	-	-	-	-	-	-
		Inferred	29.50	25.00	53.39	43.28	4.09	24.05	9.56	0.68
		Total	**31.30**	**26.61**	**53.27**	**43.34**	**4.08**	**23.90**	**9.60**	**0.68**
LANDAK/ PT GK	Mempawah Hulu	Measured	-	-	-	-	-	-	-	-
		Indicated	-	-	-	-	-	-	-	-
		Inferred	87.00	73.95	52.00	43.00	4.00	26.00	9.50	0.50
		Total	**87.00**	**73.95**	**52.00**	**43.00**	**4.00**	**26.00**	**9.50**	**0.50**
Total Bauxite Resources of ANTAM Subsidiaries		Measured	55.37	47.18	49.66	42.79	4.02	25.30	8.78	0.64
		Indicated	31.05	26.48	51.40	42.91	4.01	24.45	9.20	0.63
		Inferred	233.87	199.21	51.09	43.16	4.08	24.45	9.57	0.58
		Total	**320.30**	**272.86**	**50.87**	**43.08**	**4.06**	**24.59**	**9.40**	**0.60**

The utilization plan of PT BEI bauxite product as part of SGAR Mempawah bauxite suppliers, along with IUP of ANTAM Mempawah and Landak, is become the main reason to convert measured and indicated bauxite resources from PT BEI IUP into proved and probable bauxite ore reserve trough modifying factors assessment. The modifying factors consist of mining (including recovery and dillution), metallurgical, economic, marketing, legal, environmental, infrastructures, social, and governance. The bauxite reserve tabulation of ANTAM's Subsidiaries is only showing PT BEI bauxite reserve in the Table 19.

Table 19. Bauxite Reserve of PT BEI as per December 31st, 2019

Area	Prospect	Reserve CLASS	Washed Bauxite		CF (%)	Average Grade (%)				
			Million of Tonnes (wmt)	Million of Tonnes (dmt)		AL2O3	R-SIO2	T-SIO2	FE2O3	TIO2
PT BEI - Landak	Menjalin & Sebadu	Proved	6.93	5.89	50.93	45.05	4.17	16.81	12.65	0.79
		Probable	25.54	21.71	52.15	43.17	5.00	22.66	10.69	0.65
		Total	**32.47**	**27.60**	**51.89**	**43.57**	**4.82**	**21.41**	**11.11**	**0.68**

The measured and indicated mineral resources are reported inclusive of those mineral resources modified to produce the ore reserves.

3. PT CIBALIUNG SUMBERDAYA

ANTAM is owner of PT Cibaliung Sumberdaya (PT CSD, owned 99,15% direct ownership share) which has gold Mining License in Pandeglang Regency, Banten Province. The mining area location is shown in Table 20 and Figure 11.

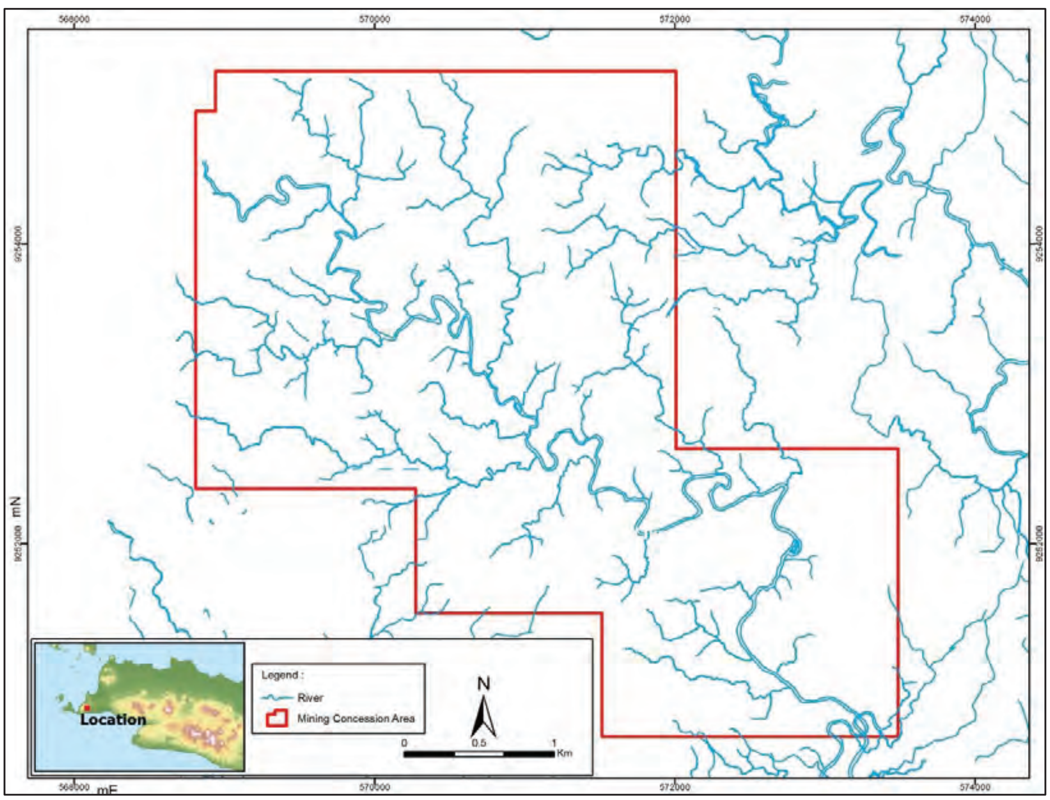

Figure 11. Map of PT CSD Mining Area in Banten Province, Indonesia.

Table 20. PT CSD Mining License

No.	Mining License Number	Location	Name of Concession Area	Coverage Area (Ha)	Validity Period	
					Start	End
1	821.13/Kep.1351-BPPT/2014	Pandeglang, Banten	Cibaliung	1,340	28 July 2015	27 July 2025

Mineral resources and ore reserves of PT CSD as per December 31st, 2019 are shown in the Table 21 and 22, all stated in thousand ounces of contained metal. Gold commodity depletes due to production during 2019, update of block model, and pillar study. Technical parameters and explanations for resource estimation are stated in Table 1 JORC/KCMI Section 3 Estimation and Reporting of Mineral Resources and Table 1 JORC/KCMI Section 4 Estimation and Reporting of Ore Reserves that made for each prospect in the appendix of this statement.

Table 21. Mineral Resources of PT CSD as per December 31st, 2019

Location	Resources Classification	Ore Tonnage (K Wmt)	Ore Tonnage (K Dmt)	Grade		Contained Metal	
				Au (g/t)	Ag (g/t)	Au (koz)	Ag (koz)
Cibaliung	Measured	1,214	1,032	8.82	65	292.5	2,172
	Indicated	417	355	6.3	69	71.9	787
	Inferred	200	170	5	34	24.7	184
	TOTAL	**1,831**	**1,557**	**7.77**	**63**	**389.0**	**3,143**

Table 22. Ore Reserves of PT CSD as per December 31st, 2019

Location	Reserve Classification	Ore Tonnage (K Wmt)	Ore Tonnage (K dmt)	Grade		Contained Metal	
				Au (g/t)	Ag (g/t)	Au (koz)	Ag (koz)
Cibaliung	Proved	139	119	5.64	55	20.0	167
	Probable	146	124	2.75	21	10.2	66
Total Reserves		**286**	**243**	**4.16**	**37**	**30.2**	**233**

The measured and indicated mineral resources are reported inclusive of those mineral resources modified to produce the ore reserves.

Table 23. List of ANTAM Competent Person & Reporting Contributor Team

No.	Name	CPI Certified/Professional Membership	Commodity	Reporting Contribution
1	Bronto Sutopo, PhD	CPI-IAGI (ER), CPI-009 MAusIMM, 206315	Gold	Coordinator
2	Febri E. Prihasto	CPI-PERHAPI (ORE), 0501691-141	Lateritic Nickel	ORE
3	Aldino Yulianto	CPI-PERHAPI (ORE), CPI-144	Lateritic Nickel	ORE
4	M. Riyan Kamil	CPI-IAGI (MRE), CPI-145	Lateritic Nickel	MRE
5	Arnazt P. Adryanto	CPI-IAGI (MRE), CPI-175 MAusIMM, 309289	Lateritic Nickel	MRE
6	Tulus Semedie	CPI-IAGI (ER), CPI-042	Lateritic Bauxite	ER
7	Arif Hindarto	CPI-IAGI (MRE), CPI-171 CPI-PERHAPI (ORE), 1203085-143	Lateritic Bauxite	MRE & ORE
8	Tafia S. Prasodjo	CPI-PERHAPI (ORE), CPI-142	Lateritic Bauxite	ORE
9	Ahmad Raymond T.	CPI-PERHAPI (ORE), 1203314-145	Ephitermal Gold	ORE
10	Novi F. Rusiana D.	PERHAPI, IAGI	Ephitermal Gold	ORE
11	Dwi Margianto	PERHAPI, IAGI	Ephitermal Gold	MRE
12	Halley Rionanda	PERHAPI, IAGI	Ephitermal Gold	MRE

Note on competency category and reporting contribution

ER : Exploration Result

MRE : Mineral Resource Estimation

ORE : Ore Reserve Estimation

Competent Person's Consent Form

Pursuant to the requirements of ASX Listing Rules 5.6, 5.22 and 5.24 and
Clause 9 of the JORC Code 2012 Edition (Written Consent Statement)

Report name

Update of Mineral Resources & Ore Reserves PT ANTAM Tbk as per December 31st, 2019

(Insert name or heading of Report to be publicly released) ('Report')

PT ANTAM Tbk

(Insert name of company releasing the Report)

Lateritic Nickel, Lateritic Bauxite, and Epithermal Gold Vein System

(Insert name of the deposit to which the Report refers)

December 31st, 2019

(Date of Report)

Statement

I am,

Bronto Sutopo

(Insert full name(s))

confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition) and Komite Cadangan Mineral Indonesia (KCMI) 2017 Code.
- I am a Competent Person as defined by the JORC and KCMI Code, along with the Competent Person Team of ANTAM having more than five years experience that is relevant to the style of mineralization and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of *The Australasian Institute of Mining and Metallurgy* that included in a list promulgated by ASX from time to time.
- I have reviewed the Report to which this Consent Statement applies.

I am a full time employee of

PT ANTAM Tbk

(Insert company name)

and have been engaged by

PT ANTAM Tbk

(Insert company name)

to prepare the documentation for

To coordinate the Competent Persons in preparing the documentation for updating resource and reserve report of lateritic nickel, lateritic bauxite, and epithermal gold system deposit

(Insert deposit name)

on which the Report is based, for the period ended

December 31st, 2019

(Insert date of Resource/Reserve statement)

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Mineral Resources and Ore Reserves.

Consent

I consent to the release of the Report and this Consent Statement by the directors of:

PT ANTAM Tbk

(Insert reporting company name)

Bronto Sutopo

Signature of Competent Person:

December 31st, 2019

Date:

KCMI, AusIMM

Professional Membership:
(insert organisation name)

CPI-009, 206315

Membership Number:

Signature of Witness:

Dana Amin

CEO of PT ANTAM Tbk. Jakarta - Indonesia

Print Witness Name and Residence:
(eg town/suburb)

Statement

I am,

Febri Estiadi Prihasto

(Insert full name(s))

confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the Komite Cadangan Mineral Indonesia (KCMI) 2017 Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.
- I am a Competent Person as defined by the KCMI Code, along with the Competent Person Team of ANTAM having more than five years experience that is relevant to the style of mineralization and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I have reviewed the Report to which this Consent Statement applies.

I am a full time employee of

PT ANTAM Tbk

(Insert company name)

and have been engaged by

PT ANTAM Tbk

(Insert company name)

to prepare the documentation for

Updating Reserve of Lateritic Nickel

(Insert deposit name)

on which the Report is based, for the period ended

December 31st, 2019

(Insert date of Resource/Reserve statement)

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Ore Reserves.

Consent

I consent to the release of the Report and this Consent Statement by the directors of:

PT ANTAM Tbk

(Insert reporting company name)

Febri Estiadi Prihasto	December 31st, 2019
Signature of Competent Person:	Date:
KCMI	0501691-141
Professional Membership:	Membership Number:

Statement

I am,

Aldino Yulianto
(Insert full name(s))

confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the Komite Cadangan Mineral Indonesia (KCMI) 2017 Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.
- I am a Competent Person as defined by the KCMI Code, along with the Competent Person Team of ANTAM having more than five years experience that is relevant to the style of mineralization and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I have reviewed the Report to which this Consent Statement applies.

I am a full time employee of

PT ANTAM Tbk
(Insert company name)

and have been engaged by

PT ANTAM Tbk
(Insert company name)

to prepare the documentation for

Updating Reserve of Lateritic Nickel
(Insert deposit name)

on which the Report is based, for the period ended

December 31st, 2019
(Insert date of Resource/Reserve statement)

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Ore Reserves.

Consent

I consent to the release of the Report and this Consent Statement by the directors of:

PT ANTAM Tbk

(Insert reporting company name)

Aldino Yulianto	December 31st, 2019
Signature of Competent Person:	Date:
KCMI	CPI-144
Professional Membership:	Membership Number:

Statement

I am,

Arif Hindarto

(Insert full name(s))

confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the Komite Cadangan Mineral Indonesia (KCMI) 2017 Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.
- I am a Competent Person as defined by KCMI Code, along with the Competent Person Team of ANTAM having more than five years experience that is relevant to the style of mineralization and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I have reviewed the Report to which this Consent Statement applies.

I am a full time employee of

PT ANTAM Tbk

(Insert company name)

and have been engaged by

PT ANTAM Tbk

(Insert company name)

to prepare the documentation for

Updating Reserve of Lateritic Bauxite

(Insert deposit name)

on which the Report is based, for the period ended

December 31st, 2019

(Insert date of Resource/Reserve statement)

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Ore Reserves.

Consent

I consent to the release of the Report and this Consent Statement by the directors of:

PT ANTAM Tbk

(Insert reporting company name)

Arif Hindarto

Signature of Competent Person:

December 31st, 2019

Date:

KCMI

Professional Membership:

1203085-143

Membership Number:

Statement

I am,

Tafia Sulistyani Prasojo

(Insert full name(s))

confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the Komite Cadangan Mineral Indonesia (KCMI) 2017 Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.
- I am a Competent Person as defined by KCMI Code, along with the Competent Person Team of ANTAM having more than five years experience that is relevant to the style of mineralization and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I have reviewed the Report to which this Consent Statement applies.

I am a full time employee of

PT ANTAM Tbk

(Insert company name)

and have been engaged by

PT ANTAM Tbk

(Insert company name)

to prepare the documentation for

Updating Reserve of Lateritic Bauxite for ANTAM Mempawah (Toho), Landak, and PT BEI

(Insert deposit name)

on which the Report is based, for the period ended

December 31st, 2019

(Insert date of Resource/Reserve statement)

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Ore Reserves.

Consent

I consent to the release of the Report and this Consent Statement by the directors of:

PT ANTAM Tbk

(Insert reporting company name)

Tafia Sulistyani Prasojo	December 31st, 2019
Signature of Competent Person:	Date:
KCMI	CPI-142
Professional Membership:	Membership Number:

Statement

I am,

Ahmad Raymond Trilaksana
(Insert full name(s))

confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the Komite Cadangan Mineral Indonesia (KCMI) 2017 Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.
- I am a Competent Person as defined by the KCMI Code, along with the Competent Person Team of ANTAM having more than five years experience that is relevant to the style of mineralization and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I have reviewed the Report to which this Consent Statement applies.

I am a full time employee of

PT ANTAM Tbk
(Insert company name)

and have been engaged by

PT ANTAM Tbk
(Insert company name)

to prepare the documentation for

Updating Reserve of Epithermal Gold Deposit
(Insert deposit name)

on which the Report is based, for the period ended

December 31st, 2019
(Insert date of Resource/Reserve statement)

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Ore Reserves.

Consent

I consent to the release of the Report and this Consent Statement by the directors of:

PT ANTAM Tbk

(Insert reporting company name)

Ahmad Raymond Trilaksana	December 31st, 2019
Signature of Competent Person:	Date:
KCMI	1203314-145
Professional Membership:	Membership Number:

Statement

I am,

Arnazt Purba Adryanto

(Insert full name(s))

confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 Edition) and Komite Cadangan Mineral Indonesia (KCMI) 2017 Code.
- I am a Competent Person as defined by the JORC and KCMI Code, along with the Competent Person Team of ANTAM having more than five years experience that is relevant to the style of mineralization and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I am a Member of *The Australasian Institute of Mining and Metallurgy*.
- I have reviewed the Report to which this Consent Statement applies.

I am a full time employee of

PT ANTAM Tbk

(Insert company name)

and have been engaged by

PT ANTAM Tbk

(Insert company name)

to prepare the documentation for

Updating Resource of Lateritic Nickel for Pomalaa, Tapunopaka, Bahubulu, Sangaji, Moronopo, Gag

(Insert deposit name)

on which the Report is based, for the period ended

December 31st, 2019

(Insert date of Resource/Reserve statement)

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Mineral Resources.

Consent

I consent to the release of the Report and this Consent Statement by the directors of:

PT ANTAM Tbk

(Insert reporting company name)

Arnazt Purba Adryanto

Signature of Competent Person:

December 31st, 2019

Date:

KCMI, AusIMM

Professional Membership:

CPI-175, 309289

Membership Number:

Statement

I am,

Mohamad Riyan Kamil

(Insert full name(s))

confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the Komite Cadangan Mineral Indonesia (KCMI) 2017 Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.
- I am a Competent Person as defined by KCMI Code, along with the Competent Person Team of ANTAM having more than five years experience that is relevant to the style of mineralization and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I have reviewed the Report to which this Consent Statement applies.

I am a full time employee of

PT ANTAM Tbk

(Insert company name)

and have been engaged by

PT ANTAM Tbk

(Insert company name)

to prepare the documentation for

Updating Resource of Lateritic Nickel for Tanjung Buli, Pakal, Lasolo-Lalindu, Mandiodo

(Insert deposit name)

on which the Report is based, for the period ended

December 31st, 2019

(Insert date of Resource/Reserve statement)

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Mineral Resources.

Consent

I consent to the release of the Report and this Consent Statement by the directors of:

PT ANTAM Tbk

(Insert reporting company name)

Mohamad Riyan Kamil

Signature of Competent Person:

December 31st, 2019

Date:

KCMI

Professional Membership:

CPI-145

Membership Number:

Statement

I am,

Arif Hindarto

(Insert full name(s))

confirm that I am the Competent Person for the Report and:

- I have read and understood the requirements of the Komite Cadangan Mineral Indonesia (KCMI) 2017 Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.
- I am a Competent Person as defined by KCMI Code, along with the Competent Person Team of ANTAM having more than five years experience that is relevant to the style of mineralization and type of deposit described in the Report, and to the activity for which I am accepting responsibility.
- I have reviewed the Report to which this Consent Statement applies.

I am a full time employee of

PT ANTAM Tbk

(Insert company name)

and have been engaged by

PT ANTAM Tbk

(Insert company name)

to prepare the documentation for

Updating Resource of Lateritic Bauxite

(Insert deposit name)

on which the Report is based, for the period ended

December 31st, 2019

(Insert date of Resource/Reserve statement)

I have disclosed to the reporting company the full nature of the relationship between myself and the company, including any issue that could be perceived by investors as a conflict of interest.

I verify that the Report is based on and fairly and accurately reflects in the form and context in which it appears, the information in my supporting documentation relating to Mineral Resources.

Consent

I consent to the release of the Report and this Consent Statement by the directors of:

PT ANTAM Tbk

(Insert reporting company name)

Arif Hindarto	December 31st, 2019
Signature of Competent Person:	Date:
KCMI	CPI-171
Professional Membership:	Membership Number:

APPENDIX - TABLE 1 JORC

Table 1 - JORC Code, 2012 Edition

Section 3 Estimation and Reporting of Mineral Resources of **Pakal Prospect**

Criteria	JORC Code explanation	Comment
Database integrity	• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. • Data validation procedures used	• Data Verification using visual, database cross checks and statistics were used to find errors in the database. • Only Drillholes with reliable data were reported in the Resources. • Improvment in Data storage and data entry procedures and recovery of some past data has been done to make the data verificated • The Data that used in resource estimation process is the same data from database division which has been done to standarized it sources whether from lab or exploration team. • Data created as a series of Microsoft Office Excel softwares files. Separate file is created for each: collar, survey, assay and geology (lithology table). • Data validation using CAE Datamine Studio 3 software consisted for checking for sample interval, geological logging overlaps, and for duplicate collars. • Validated the data with building the collar, assay, and lithology data into drillhole data. If there's any error, the data will check from raw data • Zero result, negative result or NA result data changed become half of detection limit and unidentified assay become absent data.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• Site visit has been done by competent person and proposing some of improvement. • Site visit and its improvement statement were reported by competent person.
Geological interpretation	• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. • Nature of the data used and of any assumptions made. • The effect, if any, of alternative interpretations on Mineral Resource estimation. • The use of geology in guiding and controlling Mineral Resource estimation. • The factors affecting continuity both of grade and geology.	• The confidence was built by synchronizing each meter drillhole data include logging data, which has been verified with core photo, and checked with assay data by senior field geologist. • Nickel laterite variation of assay data was good enough. • Regular spaced sampling demonstrated good continuity of the ore thickness and have some grade variability but not much and disperse in big coverage area.

Criteria	JORC Code explanation	Comment
		• The fact about interspace data zone is exist but it forced become no interspace data for simplify geological model that will be used in estimation procces. • The geology of the Deposit is well understood from drillholes data and mapping, continuity of grade along down drillholes and detailed geological logging of drillhole. • Geology is key to estimate, by its lithology control that verified with assay data. • Lateritic Boundary was used to limiting coverage of estimation area. • erratic depth of weathering gives significant impact. • presence of the boulder, structure and erratic boundary affecting continuity grade and geology.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• The dimension is determined based on zone which is taken from exploration data logging and assay result domaining, which being wireframing after each bore zone were conducted. • Its continuity was limited by the laterite boundary. • The large extent and location of the resource is consistent with the basement geology and topography profile covering to a maximum depth of generally 25 m and a maximum of 70 m.
Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. • The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. • The assumptions made regarding recovery of by-products. • Estimation of deleterious elements or other non-grade variables of economic significance	• Estimate was doing with flattened top cutted drillholes data and being estimated with kriging method for Mornopo and inverse distance square for Pakal and Tanjung Buli in each laterite zone. Extreme grade values were top cutted after statistical analytic to ignore the overbiased around the extreme value. • Extrapolation distance was using variography range and being extrapolated maximum 400 metre and estimated with Datamine. • Simplistic analysis on estimation of 12.5 x 12.5 x 1m blocks has provided a reasonable basis for estimating the resource on a global basis.

Criteria	JORC Code explanation	Comment
	(eg sulphur for acid mine drainage characterisation). • In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. • Any assumptions behind modelling of selective mining units. • Any assumptions about correlation between variables. • Description of how the geological interpretation was used to control the resource estimates. • Discussion of basis for using or not using grade cutting or capping. • The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	• Estimates result always compared with previous estimates. • The contain of boulder which make lower grade. • Request of grade range by economic and technical consideration. • Correlation between assay were analyzed in EDA and it has correlation between Co, Fe, MgO and SiO2 for domaining. • Controling boundary of resource estimation as geological domaining, boundary laterite and drill hole penetration limit. • Top cutting is important to avoid overbiased near of extreme grade and it has been done by statistical analysis and economic projection. • Validate Block Bodel by overlaying it with drillhole data whether its result has closed enough or not. • Comparing the statistic resume as mean, min, max etc. • Validation using visual and database cross checks were used to find and correct errors in the resource estimation.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnages are estimated both on wet and dry basis. • In Pakal prospect, moisture that used in resource estimation is 22% for saprolite and 27% for limonite
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• The resource model is constrained by assumptions about economic cut-off grades. • The ore zone interpretations are based upon a low grade cut-off grade of effectively 1.2% Ni for limonite for hydro-metallurgical processing. • A higher grade saprolite cut-off of 1.5% Ni for pyro-metallurgical processing.
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the	• Cut-off Grade and Boundary laterite were applied to limit the mining area

Criteria	JORC Code explanation	Comment
	assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	• Based on the detailed chemical analyses, data that applied on Cut-off Grade is possible to assess the metallurgical amenability of the Nickel.
Environmental factors or assumptions	• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• The main potential environmental issues directly consequent on the mineralisation and associated waste are expected to derive from: • The fine clay-like nature of the mineralisation, which could potentially cause issues such as high airborne particulate matter when dry, and high suspended solids content in surface water run-off from active mining areas. • Tailing pond were applied to prevent water that containing mud from mining activity involved with natural water
Bulk density	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. • The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. • Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• Bulk density was measured in many exploration area with pit sampling method. • In Pakal prospect, the in situ wet bulk density estimated at 1.71 ton/m3 for limonite and 1.73 ton/m3 for saprolite.
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories.	• Classification varied slightly between the deposits. All classification of resource estimates was based on a combination of

Criteria	JORC Code explanation	Comment
	• Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). • Whether the result appropriately reflects the Competent Person's view of the deposit.	drill hole spacing, the ranges of mineralisation continuity, availability of all assay suits for geochemical classification. • Measured Mineral Resource Drill spacing of25x25 metre (depending on deposit and variography results). • Indicated Mineral Resource Drill spacing of 50x50 metre until 100x100 metre (depending on deposit and variography results). • Inferred Mineral Resource Drill spacing of 200x200 meter until 400x400 meter, including material extended beyond the last line of drilling where deposits have not been closed out.
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	•
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• The Resources identified in the Antam metal grade project area is substantial and provide the basis for a large scale economic project. • The Mineral Resource and grades are reliable due to the large number of drillholes and samples. • All the nickel is considered to ultimately be economic.

Table 1 - JORC Code, 2012 Edition

Section 4 Estimation and Reporting of Ore Reserves of **Pakal Prospect**

Criteria	JORC Code explanation	Comment
Mineral Resource estimate for conversion to Ore Reserves	• Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. • Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	• Mineral resources model are estimated by Geomin (ANTAM's exploration unit). • The measured and indicated nickel resources are inclusive of mineral resources • Ore reserves estimated are classified based on measured and indicated resources into proved and probable ore reserves • Ore reserve estimate for nickel laterite is reported into Limonite and saprolite ore
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• The Competent Person visited Pakal Mine regularly between 2011-2019
Study status	• The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.Nature of the data used and of any assumptions made. • The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	• Pakal nickel deposit is a brownfield expansion of existing operations • Updated Feasibility study has been done in 2018
Cut-off parameters	• The basis of the cut-off grade(s) or quality parameters applied.	• Ni > 1.5 % is the cut-off grade applied in Pakal deposit
Mining factors or assumptions	• The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). • The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. • The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.	• Pit optimization with industry standard software were undertaken. This optimisation utilised the Mineral Resources model together with cost, revenue, and mining parameter inputs. As a result, optimized block model were exported from the software. • During the above process, inferred Mineral Resources were excluded from pit optimization" • Conventional mining methods (truck and shovel) are utilised based on existing mine operation at Pakal

Criteria	JORC Code explanation	Comment
	• The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). • The mining dilution factors used. • In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. • The mining recovery factors used. • Any minimum mining widths used. • Description of how the geological interpretation was used to control the resource estimates. • The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. • The infrastructure requirements of the selected mining methods.	• The geotechnical parameters have been applied based on updated geotechnical studies in 2012. • Assumed from existing production data • Mining Dilution used is 3 % • Mining Recovery used is 93 % • Minimum mining width used is 12.5 m • Inferred are not utilized • Require ore stockyard, waste dump, Grizzly Screening, settling pond, Office, Townhouse, etc • Pakal mine already have all the infrastructures required.
Metallurgical factors or assumptions	• The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. • Whether the metallurgical process is well-tested technology or novel in nature. • The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. • Any assumptions or allowances made for deleterious elements. • The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. • For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	• Based on the mineral resources estimation data, Pakal ore is meet the grade requirement for the proposed supplly plan • Pakal will supply ore for Feni Pomalaa and NPI Blast Furnace" • Feni Pomalaa Plant is well tested and have been operated for 30 years • NPI Blast Furnace is a proven technology and will be adopted to process Pakal's ore • Antam only analyze 12 elements (Ni, Fe, SiO_2, MgO , Co, CaO, Al_2O_3, Cr_2O_3, MnO, P_2O_5, SO_3, TiO_2) • The Feni Pomalaa plant is a proven operation for more than 30 years. No need to do any pilot test. • The NPI Blast Furnace is a proven technology. Based on geochemical data, Bahubulu ore meet the ore specification needed for NPI Blast Furnace" • Yes, based on geochemical data, Pakal ore meet Feni Pomalaa Plant and NPI Blast Furnace ore specification
Environmental	• The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of	• Environmental stucies (AMDAL) based on Indonesia's Environmental Regulation has been done and approved by Government

Criteria	JORC Code explanation	Comment
	potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	
Infrastructure	• The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	• Yes it is already appropriate
Costs	• The derivation of, or assumptions made, regarding projected capital costs in the study. • The methodology used to estimate operating costs. • Allowances made for the content of deleterious elements. • The source of exchange rates used in the study. • Derivation of transportation charges. • The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. • The allowances made for royalties payable, both Government and private.	• Capital cost were estimated based on Antam's Long Term Plan • Operating cost were estimated based on Pakal historical production data • No deleterious element has been analyzed • Exchange rates obtained from assumption made in Antam's Annual Work Plan & Budget • Transportation costs were based on existing operation data • Assumed from existing production data • The allowances have been made for royalties to the government
Revenue factors	• The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. • The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	• Metal price assumptions based on Antam's Long Term Plan 2019-2024 • Metal price based on Antam's Long Term Plan 2019-2024
Market assessment	• The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. • A customer and competitor analysis along with the identification of likely market windows for the product. • Price and volume forecasts and the basis for these forecasts. • For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	• Ore reserves estimation already based on Antam's future plan in which will absorb ore optimally • Antam delivers products aligned with its Mineral Resources and Ore Reserves which are successfully competed with nickel products supplied by other companies • Forecast has been made by Antam's budgeting team • Antam delivers products aligned with its Mineral Resources and Ore Reserves, these products have changed over time and successfully meet the requirement for ore supply
Economic	• The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic	• Economic inputs are generated internally at Antam. The detail of this process is

Criteria	JORC Code explanation	Comment
	inputs including estimated inflation, discount rate, etc. • NPV ranges and sensitivity to variations in the significant assumptions and inputs.	commercially sensitive and is not disclosed • Sensitivity has been made by various scenario
Social	• The status of agreements with key stakeholders and matters leading to social licence to operate.	• The Pakal prospect is part of Antam's North Maluku Mining License (IUP) that have been granted baesd on Mineral and Coal Mining Regulation of 2009
Other	• To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: • Any identified material naturally occurring risks. • The status of material legal agreements and marketing arrangements. • The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	• The risks has been analyzed in Antam's Long Term Plan 2019-2024 • Both has been performed • No issues regarding to the mineral tenement status & government and statutory approvals.
Classification	• The basis for the classification of the Ore Reserves into varying confidence categories. • Whether the result appropriately reflects the Competent Person's view of the deposit. • The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	• All measured mineral resources have been convert into Proved Ore Reserves, there is no consideration yet to put some proportion of measured mineral resources to be converted into probable ore reserve • The competent person satisfy that the Ore Reserves classification reflects the outcome of technical and economical studies • The classification of proven and probable ore reserves is based on the confidence categories of measured and indicated resources. The ore reseves for Pakal consist of 99% Proved Reserves and 1% Probable Reserves
Audits or reviews	• The results of any audits or reviews of Mineral Reserve estimates.	• The ore reserves estimate have not been reviewed yet
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the	• Data accuracy could be improved by conducting robust operation monitoring

Criteria	JORC Code explanation	Comment
	Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. • It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• Annual Mining Plan reviewed by comparing with ANTAM's Annual Work Plan & Budget • Commodity price, mining cost, and government's regulation give the biggest impact for reserves estimation.. • Mining reconciliation have been conducted regularly to compare mine plan vs actual production.

Table 1 - JORC Code, 2012 Edition

Section 3 Estimation and Reporting of Mineral Resources of **Tanjung Buli Prospect**

Criteria	JORC Code explanation	Comment
Database integrity	• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. • Data validation procedures used	• Data Verification using visual, database cross checks and statistics were used to find errors in the database. • Only Drillholes with reliable data were reported in the Resources. • Improvment in Data storage and data entry procedures and recovery of some past data has been done to make the data verificated • The Data that used in resource estimation process is the same data from database division which has been done to standarized it sources whether from lab or exploration team. • Data created as a series of Microsoft Office Excel softwares files. Separate file is created for each: collar, survey, assay and geology (lithology table). • Data validation using CAE Datamine Studio 3 software consisted for checking for sample interval, geological logging overlaps, and for duplicate collars. • Validated the data with building the collar, assay, and lithology data into drillhole data. If there's any error, the data will check from raw data • Zero result, negative result or NA result data changed become half of detection limit and unidentified assay become absent data.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• Site visit has been done by competent person and proposing some of improvement. • Site visit and its improvement statement were reported by competent person.
Geological interpretation	• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. • Nature of the data used and of any assumptions made. • The effect, if any, of alternative interpretations on Mineral Resource estimation. • The use of geology in guiding and controlling Mineral Resource estimation. • The factors affecting continuity both of grade and geology.	• The confidence was built by synchronizing each meter drillhole data include logging data, which has been verified with core photo, and checked with assay data by senior field geologist. • Nickel laterite variation of assay data was good enough. • Regular spaced sampling demonstrated good continuity of the ore thickness and have some grade variability but not much and disperse in big coverage area. • The fact about interspace data zone is exist but it forced become no interspace

Criteria	JORC Code explanation	Comment
		data for simplify geological model that will be used in estimation procces. • The geology of the Deposit is well understood from drillholes data and mapping, continuity of grade along down drillholes and detailed geological logging of drillhole. • Geology is key to estimate, by its lithology control that verified with assay data. • Lateritic Boundary was used to limiting coverage of estimation area. • erratic depth of weathering gives significant impact. • presence of the boulder, structure and erratic boundary affecting continuity grade and geology.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• The dimension is determined based on zone which is taken from exploration data logging and assay result domaining, which being wireframing after each bore zone were conducted. • Its continuity was limited by the laterite boundary. • The large extent and location of the resource is consistent with the basement geology and topography profile covering to a maximum depth of generally 25 m and a maximum of 70 m.
Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. • The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. • The assumptions made regarding recovery of by-products. • Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).	• Estimate was doing with flattened top cutted drillholes data and being estimated with kriging method for Mornopo and inverse distance square for Pakal and Tanjung Buli in each laterite zone. Extreme grade values were top cutted after statistical analytic to ignore the overbiased around the extreme value. • Extrapolation distance was using variography range and being extrapolated maximum 400 metre and estimated with Datamine. • Simplistic analysis on estimation of 12.5 x 12.5 x 1m blocks has provided a reasonable basis for estimating the resource on a global basis. • Estimates result always compared with previous estimates.

Criteria	JORC Code explanation	Comment
	• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. • Any assumptions behind modelling of selective mining units. • Any assumptions about correlation between variables. • Description of how the geological interpretation was used to control the resource estimates. • Discussion of basis for using or not using grade cutting or capping. • The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	• The contain of boulder which make lower grade. • Request of grade range by economic and technical consideration. • Correlation between assay were analyzed in EDA and it has correlation between Co, Fe, MgO and SiO2 for domaining. • Controling boundary of resource estimation as geological domaining, boundary laterite and drill hole penetration limit. • Top cutting is important to avoid overbiased near of extreme grade and it has been done by statistical analysis and economic projection. • Validate Block Bodel by overlaying it with drillhole data whether its result has closed enough or not. • Comparing the statistic resume as mean, min, max etc. • Validation using visual and database cross checks were used to find and correct errors in the resource estimation.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnages are estimated both on wet and dry basis. • In Tanjung Buli prospect, moisture that used in resource estimation is 23% for saprolite and 31% for limonite
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• The resource model is constrained by assumptions about economic cut-off grades. • The ore zone interpretations are based upon a low grade cut-off grade of effectively 1.2% Ni for limonite for hydro-metallurgical processing. • A higher grade saprolite cut-off of 1.5% Ni for pyro-metallurgical processing.
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where	• Cut-off Grade and Boundary laterite were applied to limit the mining area

Criteria	JORC Code explanation	Comment
	this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	
Metallurgical factors or assumptions	• The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	• Based on the detailed chemical analyses, data that applied on Cut-off Grade is possible to assess the metallurgical amenability of the Nickel.
Environmental factors or assumptions	• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	• The main potential environmental issues directly consequent on the mineralisation and associated waste are expected to derive from: • The fine clay-like nature of the mineralisation, which could potentially cause issues such as high airborne particulate matter when dry, and high suspended solids content in surface water run-off from active mining areas. • Tailing pond were applied to prevent water that containing mud from mining activity involved with natural water
Bulk density	• Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. • The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. • Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• Bulk density was measured in many exploration area with pit sampling method. • In Tanjung Buli prospect, the in situ wet bulk density estimated at 1.73 ton/m3 for limonite and 1.64 ton/m3 for saprolite.
Classification	• The basis for the classification of the Mineral Resources into varying confidence categories. • Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and	• Classification varied slightly between the deposits. All classification of resource estimates was based on a combination of drill hole spacing, the ranges of mineralisation continuity, availability of

Criteria	JORC Code explanation	Comment
	metal values, quality, quantity and distribution of the data). • Whether the result appropriately reflects the Competent Person's view of the deposit.	all assay suits for geochemical classification. • Measured Mineral Resource Drill spacing of25x25 metre (depending on deposit and variography results). • Indicated Mineral Resource Drill spacing of 50x50 metre until 100x100 metre (depending on deposit and variography results). • Inferred Mineral Resource Drill spacing of 200x200 meter until 400x400 meter, including material extended beyond the last line of drilling where deposits have not been closed out.
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	•
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• The Resources identified in the Antam metal grade project area is substantial and provide the basis for a large scale economic project. • The Mineral Resource and grades are reliable due to the large number of drillholes and samples. • All the nickel is considered to ultimately be economic.

Table 1 - JORC Code, 2012 Edition

Section 4 Estimation and Reporting of Ore Reserves of **Tanjung Buli Prospect**

Criteria	JORC Code explanation	Comment
Mineral Resource estimate for conversion to Ore Reserves	• Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. • Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	• Mineral resources model are estimated by Geomin (ANTAM's exploration unit). • The measured and indicated nickel resources are inclusive of mineral resources • Ore reserves estimated are classified based on measured and indicated resources into proved and probable ore reserves • Ore reserve estimate for nickel laterite is reported into Limonite and saprolite ore
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• The Competent Person visited Tanjung Buli Mine regularly between 2011-2019
Study status	• The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.Nature of the data used and of any assumptions made. • The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	• Tanjung Buli nickel deposit is a brownfield expansion of existing operations • Updated Feasibility study has been done in 2018
Cut-off parameters	• The basis of the cut-off grade(s) or quality parameters applied.	• Ni > 1.5 % is the cut-off grade applied in Tanjung Buli deposit
Mining factors or assumptions	• The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). • The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. • The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.	• Pit optimization with industry standard software were undertaken. This optimisation utilised the Mineral Resources model together with cost, revenue, and mining parameter inputs. As a result, optimized block model were exported from the software. • During the above process, inferred Mineral Resources were excluded from pit optimization" • Conventional mining methods (truck and shovel) are utilised based on existing mine operation at Tanjung Buli

Criteria	JORC Code explanation	Comment
	• The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). • The mining dilution factors used. • In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. • The mining recovery factors used. • Any minimum mining widths used. • Description of how the geological interpretation was used to control the resource estimates. • The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. • The infrastructure requirements of the selected mining methods.	• The geotechnical parameters have been applied based on updated geotechnical studies in 2013. • Assumed from existing production data • Mining Dilution used is 3 % • Mining Recovery used is 93 % • Minimum mining width used is 25 m • Inferred are not utilized • Require ore stockyard, waste dump, Grizzly Screening, settling pond, Office, Townhouse, etc • Tanjung Buli mine already have all the infrastructures required.
Metallurgical factors or assumptions	• The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. • Whether the metallurgical process is well-tested technology or novel in nature. • The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. • Any assumptions or allowances made for deleterious elements. • The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. • For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	• Based on the mineral resources estimation data, Pakal ore is meet the grade requirement for the proposed supply plan • Tanjung Buli will supply ore for Feni Plant and NPI Blast Furnace" • Antam's Feni Plant is already built in North Maluku • NPI Blast Furnace is a proven technology and will be adopted to process tapunopaka's ore • The ore meets the plant requirement • Antam only analyze 12 elements (Ni, Fe, SiO_2, MgO , Co, CaO, Al_2O_3, Cr_2O_3, MnO, P_2O_5, SO_3, TiO_2) • Antam's Feni Plant is already built in North Maluku. Met Test was already performed • The NPI Blast Furnace is a proven technology. Based on geochemical data, Tanjung Buli ore meet the ore specification needed for NPI Blast Furnace" • Yes, based on geochemical data, Tanjung Buli ore meet Feni Plant and NPI Blast Furnace ore specification

Criteria	JORC Code explanation	Comment
Environmental	• The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	• Environmental stucies (AMDAL) based on Indonesia's Environmental Regulation has been done and approved by Government
Infrastructure	• The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	• Yes it is already appropriate
Costs	• The derivation of, or assumptions made, regarding projected capital costs in the study. • The methodology used to estimate operating costs. • Allowances made for the content of deleterious elements. • The source of exchange rates used in the study. • Derivation of transportation charges. • The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. • The allowances made for royalties payable, both Government and private.	• Capital cost were estimated based on Antam's Long Term Plan • Operating cost were estimated based on Tanjung Buli historical production data • No deleterious element has been analyzed • Exchange rates obtained from assumption made in Antam's Annual Work Plan & Budget • Transportation costs were based on existing operation data • Assumed from existing production data • The allowances have been made for royalties to the government
Revenue factors	• The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. • The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	• Metal price assumptions based on Antam's Long Term Plan 2019-2024 • Metal price based on Antam's Long Term Plan 2019-2024
Market assessment	• The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. • A customer and competitor analysis along with the identification of likely market windows for the product. • Price and volume forecasts and the basis for these forecasts. • For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	• Ore reserves estimation already based on Antam's future plan in which will absorb ore optimally • Antam delivers products aligned with its Mineral Resources and Ore Reserves which are successfully competed with nickel products supplied by other companies • Forecast has been made by Antam's budgeting team • Antam delivers products aligned with its Mineral Resources and Ore Reserves, these products have changed over time

Criteria	JORC Code explanation	Comment
		and successfully meet the requirement for ore supply
Economic	• The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. • NPV ranges and sensitivity to variations in the significant assumptions and inputs.	• Economic inputs are generated internally at Antam. The detail of this process is commercially sensitive and is not disclosed • Sensitivity has been made by various scenario
Social	• The status of agreements with key stakeholders and matters leading to social licence to operate.	• The Tanjung Buli prospect is part of Antam's North Maluku Mining License (IUP) that have been granted baesd on Mineral and Coal Mining Regulation of 2009
Other	• To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: • Any identified material naturally occurring risks. • The status of material legal agreements and marketing arrangements. • The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	• The risks has been analyzed in Antam's Long Term Plan 2019-2024 • Both has been performed • No issues regarding to the mineral tenement status & government and statutory approvals.
Classification	• The basis for the classification of the Ore Reserves into varying confidence categories. • Whether the result appropriately reflects the Competent Person's view of the deposit. • The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	• All measured mineral resources have been convert into Proved Ore Reserves, there is no consideration yet to put some proportion of measured mineral resources to be converted into probable ore reserve • The competent person satisfy that the Ore Reserves classification reflects the outcome of technical and economical studies • The classification of proven and probable ore reserves is based on the confidence categories of measured and indicated resources. The ore reseves for Tanjung Buli consist of 76% Proved Reserves and 24% Probable Reserves

Criteria	JORC Code explanation	Comment
Audits or reviews	• The results of any audits or reviews of Mineral Reserve estimates.	• The ore reserves estimate have not been reviewed yet
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. • It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• Data accuracy could be improved by conducting robust operation monitoring • Annual Mining Plan reviewed by comparing with ANTAM's Annual Work Plan & Budget • Commodity price, mining cost, and government's regulation give the biggest impact for reserves estimation.. • Mining reconciliation have been conducted regularly to compare mine plan vs actual production.

Table 1 - JORC Code, 2012 Edition

Section 3 Estimation and Reporting of Mineral Resources of **Mornopo Prospect**

Criteria	JORC Code explanation	Comment
Database integrity	• Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. • Data validation procedures used	• Inputing data system and data storage development makes the database more reliable. • Data (collar, lithology, assay) input use application developed by Geomin Unit of PT ANTAM in Microsoft Access has automatic function to create information such as borehole interception (FROM/TO), sample number, etc. to avoid mistype. • Data for resource estimation are from database division which is collected from exploration division. • The database is validated by exploration division as first validation step when data collection, then validated by database division prior to stored and managed. • Data from database division then validated by resource estimation division prior to be processed. • The data validation such as validate the collar, validate the borehole interception, and validate the assay.
Site visits	• Comment on any site visits undertaken by the Competent Person and the outcome of those visits. • If no site visits have been undertaken indicate why this is the case.	• Site visit have been conducted several times by Competent Person. • Competent person discussed with exploration team about database when visit the site.
Geological interpretation	• Confidence in (or conversely, the uncertainty of the geological interpretation of the mineral deposit. • Nature of the data used and of any assumptions made. • The effect, if any, of alternative interpretations on Mineral Resource estimation. • The use of geology in guiding and controlling Mineral Resource estimation. • The factors affecting continuity both of grade and geology.	• Geological interpretation has been undertaked in Datamine StudioRM mining software. • Geological interpretation based on geological domain (overburden, limonite, saprolite, and bedrock). • The geological domain was crosschecked by Explanatory Data Analysis. • Most of the old database does not have lithology information, so the geological domain is defined using assay (Ni, Fe, MgO, and SiO_2) by create vertical profile and checked by ternary diagram. • No alternative interpretation. • Each geological domain model is built in three dimensions.

Criteria	JORC Code explanation	Comment
		• Grade estimation for limonite and saprolite was estimated separately. • Boundary of laterite is a limit of geological continuity.
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	• The area of laterite is about 920 Ha. • The depth of laterite below surface is 1.2 m in average.
Estimation and modelling techniques	• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. • The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. • The assumptions made regarding recovery of by-products. • Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation). • In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. • Any assumptions behind modelling of selective mining units. • Any assumptions about correlation between variables. • Description of how the geological interpretation was used to control the resource estimates. • Discussion of basis for using or not using grade cutting or capping. • The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	• The resource estimation has been undertaken in Datamine StudioRM mining software. • The grade estimation is controlled by geological interpretation. Limonite and saprolite was estimated separately based on geological domain. Sample limonite estimated by limonite sample only and saprolite estimated by saprolite sample only. • Ordinary Kriging (OK) has been applied to estimate the grades, but for several minor grade estimated using Inverse Distance Square (IDS) due to the variogram cannot be obtained. • Variography was analysed in flat elevation. • The grade was estimated into block model in flat elevation and returned to actual elevation after grade estimation. • Block model size is a half of borehole spacing. This block size is a rule of thumb to create block model. • The borehole spacing are 25 m × 25 m, 50 m × 50 m, 100 m × 100 m, and 200 m × 200 m. so, the parent cell of block model is created in three size depend on the borehole spacing. The three parents cell size are 12.5 m × 12.5 m, 25 m × 25 m, and 50 m × 50 m. Although the parent cell is different for each borehole spacing but the cell size is 12.5 m × 12.5 m to keep the block model volume is similar with the wireframe volume. • The searching volume is ellipse. Three searching volume was applied to interpolate the grades. First search ellipse as a main searching volume is 40 m × 40 m × 10 m. The second search

Criteria	JORC Code explanation	Comment
		ellipse is three times of first search ellipse and the third search ellipse is six times of first search ellipse. • Minimum sample for grade estimation is 3 and maximum is 5 for first search ellipse, while for second and third search ellipse use 3 and 8 as minimum and maximum sample. • Grade cutting was used to get better data population then get better variogram experimental to be modelled. • Swath plot was used to validate the grade in block model compare to the grade in sample. • Another validation is create sections to display grade in block model and borehole, then compare the distribution.
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	• Tonnages are stated on wet basis and dry basis. • Moisture content (MC) was determined by analysis in internal assay laboratorium. • Average MC for limonite is 33%, while for saprolite is 25%
Cut-off parameters	• The basis of the adopted cut-off grade(s) or quality parameters applied.	• Cut-off grade was applied to estimate the resources. • Consideration to define cut-off grade is the ore utilization. • Cut-off grade for limonite is 1.2 % Ni due to the utilization plan of low grade ore management. • Cut-off grade for saprolite is 1.5 % Ni due to the utilization plan for Rotary Kiln Electric Furnace (RKEF).
Mining factors or assumptions	• Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	• Mining method in Mornopo is undertaken by open pit.