

PRESS RELEASE

27 May 2020

Petropavlovsk PLC

Annual Results for the Year Ended 31 December 2019 and Q1 2020 Production Update

Petropavlovsk PLC ("Petropavlovsk" or the "Company" or, together with its subsidiaries, the "Group"), today issues its audited annual results for the year ended 31 December 2019, as well as its Q1 2020 production / sales update and guidance for 2020.

The financial and operational highlights of both trading periods are as follows:

2019 Financial Highlights

		31-Dec-19	31-Dec-18	% Change
Total gold produced	koz	517.3	422.3	+22%
Total gold sold	koz	514.0	369.6	+39%
Total Cash Costs*	\$/oz	749	678	+10%
All-in Sustaining Costs*	\$/oz	1,020	1,079	(5%)
Avg. realised gold price*	\$/oz	1,346	1,263	+7%
Group revenue (including non- precious operations)	\$m	741.6	499.8	+48%
Underlying EBITDA*	\$m	264.8	182.7	+45%
Operating profit	\$m	115.4	126.6	(9%)
Profit for the year	\$m	25.7	25.9	(0.8%)
Capital expenditure*	\$m	103.8	134.4	(23%)
Cash generated from operations before working capital changes	\$m	250.5	162.3	+54%
Cash generated from operations	\$m	189.3	329.8	(43%)
(Net debt*) / cash	\$m	(561.3)	(568.0)	(1%)

- **Total gold production increased 22%:** full year guidance met, with 517.3koz of gold produced (2018: 422.3koz), including 45.7koz produced from third-party concentrates (2018: none)
- Total gold sales increased 39%: 514.0koz (2018: 369.6koz)
- Average realised gold price[↑] increased 7%: \$1,346/oz (2018: \$1,263/oz) for the year, including a \$61/oz loss from hedging (2018: \$9/oz hedging loss)
- Cash generated from operations before changes in working capital increased 54%: reflecting the increase in physical sales and higher gold price

[•] See "The Use and Application of Alternative Performance Measures (APMs)" section for further information on our APMs

- **Group revenue (including non-precious operations) increased 48%:** \$741.6m (2018: \$499.8m) reflecting higher production volumes and a higher average gold sales price
- Underlying EBITDA* increased 45%: \$264.8m (2018: \$182.7m)
- Profit for the year marginally decreased by 0.8%: to \$25.7m (2018: \$25.9m) reflecting higher impairment reversals in 2018 and reduced interest capitalisation in 2019 following POX completion as well as the impairment of the Company's holding in IRC Ltd. ("IRC") amounting to \$23.4m, as a consequence of the potential disposal of the investment
- Total Cash Costs (TCC*) were at the lowest end of downward revised guidance: \$749/oz (2018: \$678/oz) following cost containment and the smooth ramp-up of the POX Hub despite being higher year-on-year due to the costs associated with the ramp-up of the POX Hub and Malomir flotation and cost inflation, partially mitigated by higher grades and recoveries and Rouble depreciation
- All-in Sustaining Costs (AISC[◆]) declined 5%: \$1,020/oz (2018: \$1,079/oz) assisted by an impairment reversal of ore stockpiles and increase in physical ounces sold
- Cash generated from operations decreased 43%: \$189.3m (2018: \$329.8m) primarily reflecting changes in working capital, including an increase in inventory of third-party flotation concentrate purchases for processing and reduced gold prepay finance of \$23.6m (2018: \$163.8m)
- **Net debt reduction**•: \$561.3m (2018: \$568.0m), the small reduction reflects an improvement in liquidity, offset by an increase in issued debt following convertible bond refinancing
- Capital expenditure* decreased 23%: \$103.8m (2018: \$134.4m) with expenditure associated with the construction of the POX Hub largely completed

COVID-19 Response and Update

Health and safety update

- There have been very few cases registered in the Amur region which is a sparsely populated area roughly equivalent to half the size of France
- Petropavlovsk's mining operations and POX Hub are naturally isolated away from population centres, and the Group has implemented measures in each operating jurisdiction to meet Government guidelines which are appropriate to the specific needs of each location, including its head offices
- High-level management actions taken include:
 - An emergency response team has been formed to limit the spread COVID-19 at the Group's Companies. Members of the response team are working in co-operation with local authorities, when and if, required;
 - The response team includes representatives from each of the Group's businesses in Russia, and coordinators have been appointed at each location who are responsible for preventative and counteractive measures; and
 - Group business travel has been restricted and the Company's Moscow and London offices have been closed until further notice, with written permission required to enter buildings
- Employee and community actions taken include:
 - Mine shift patterns have been adjusted to lower the frequency of new teams arriving onsite;
 - Before commencing each shift, employees and contractors are required to undertake 14 days quarantine in four purpose-built camps, with virus testing on arrival and before moving to the sites;
 - Medical infra-red thermometers are used daily to take the temperature of employees;
 - Designated isolation zones have been set up to house any individuals showing flu-like symptoms;
 - In addition to the recommended hygiene measures, a comprehensive site awareness campaign is being carried out; and
 - Awareness programmes targeting the local community have also been put in place, and the Company is supporting local businesses and the community through the distribution of masks and hand sanitisers
- As a result, there have been no cases of COVID-19 amongst Petropavlovsk employees

- In response to the COVID-19 outbreak, the Russian Government has been introducing a wide range of measures including non-work period (from which Petropavlovsk is exempt as a continuous process organisation). It has also expanded the authority of regional heads to set further specific measures relevant for their regions;
- While the non-work period was officially lifted by the Federal government, most regional authorities are maintaining the restrictions;
- Other measures include certain tax, credit and reporting holidays which are of benefit to certain suppliers to the Group's business; and
- Petropavlovsk has been included in the most recently revised Federal list of Russia's systemically important companies. Additionally, the JSC Pokrovskiy Mine (including Pioneer), LLC Albynskiy Rudnik (Albyn) and LLC Malomirskiy Rudnik (Malomir) companies have been identified as being strategically important to the Amur Region. This entails more stringent oversight by the Federal authorities and local Ministry of Economic Development as well as the executive branch of local government, and the Company believes this reduces the risk of business interruption

Logistics and sales update

- The Company continues to monitor its supply chain and is putting in place all necessary precautions to ensure business continuity;
- While the Central Bank of Russia has temporarily suspended gold purchases, commercial banks in Russia continue to buy gold bullion and the Company continues to sell gold through Russian commercial banks: and
- The Company also can export gold bullion and confirms that it has the necessary licences in place required to export gold for sale outside of Russia, and that it has shipped gold to the UK and Switzerland from 2020

Corporate Developments

Debt refinancing

- As at 31 December 2019, the Company's debt amounted to \$609m, comprising of \$500m of guaranteed notes (8.125% coupon, maturing November 2022) and \$125m of convertible bonds (\$109m at amortised cost, 8.25% coupon, maturing July 2024)
- The Board is actively considering a number of liability management options with the aim of reducing the Company's leverage and cost of debt

Hedging and price protection (gold and FX)

- The previous Gold hedging programme was entered into at the bank's request at a low level of gold prices using gold forwards contracts, which did not allow for participation in higher prices and which expired 31 Dec 2019
- Commencing April 2020, the Company entered into the following arrangements (maturing in Dec 2021):
 - Zero cost collar with a RUB:USD price floor of RUB75.0 and a cap of RUB96.2 on average for US\$7m a month to secure the preferred exchange rate of RUR/USD for funding of Group's RUB operating expenses
 - Zero cost collar with a gold price floor of \$1,600/oz and a cap of \$1,832/oz for 3.5koz a
 month to secure the preferred level of the gold price while leaving the upside for the gold
 price increase
- The Company's hedging policy is being reviewed, taking into account current gold price increase trend and Group's Viability analysis

Gazprombank gold sales and liquidity agreement

- Gazprombank has approved a gold prepays limit of c.392koz, valid through to the end of May 2024, allowing it to receive cash prepay for 70% of the price of the gold for a period up to 24 months
- This will allow the Company to receive gold prepays not exceeding in total 33.9bn RUR (c.US\$470m)
- Advances to be settled using proceeds at the prevailing gold price at the date of shipment

Capital allocation and dividend policy

- Building on the Company's recent strong operational and financial performance, the Company aims
 to update its capital allocation policy in line with the Company's goal to balance between
 deleveraging, capital investment and return to shareholders
- This policy is currently under review and a further statement will be made in due course

Development Highlights

Construction of a new flotation facility at Pioneer

- Construction of a new two-line flotation facility at Pioneer commenced in 2019 to double the Group's refractory ore processing capacity from 3.6Mtpa to 7.2Mtpa
- All key equipment items required to complete construction of the facility have arrived in Russia notwithstanding the COVID-19 related lockdown measures, and completion remains on schedule for Q4 2020 commissioning

Albyn Elginskoye mine development

- Pre-production work undertaken in 2019 included extensive in-fill drilling to increase the accuracy of near and medium-term mining plans and the completion of construction of a c.30km all season road between Albyn and Elginskoye
- Waste stripping activity remains on schedule for first production in H2 2020 to coincide with the cessation of mining at the Albyn open pit

2019 Reserves & Resources Update

- As at 31 December 2019, the Company's internal estimate of total Group Mineral Resources (including Reserves) amounted to 21.03Moz of gold, compared to 20.52Moz at the end of 2018, with total Reserves also increasing from 8.21Moz to 8.46Moz net of depletion
- An estimated c.0.5Moz was depleted through mining activities in 2019 which were more than replaced through the conversion of Resources to Reserves predominantly at the Albyn Elginskoye and Malomir Quartzitovoye deposits as a result of successful exploration completed during 2019
- An independently audited estimate is expected to be published during Q3 2020

Corporate Matters

Refinancing of IRC's project finance facility with Gazprombank

- In March 2019, Petropavlovsk shareholders approved the Company's proposal to guarantee \$240m of debt facilities with Gazprombank, on behalf of IRC Limited ("IRC")
- The new Gazprombank facilities enabled IRC to fully repay an outstanding project finance facility
 with the Industrial and Commercial Bank of China Limited ("ICBC"), together with repayment to
 Petropavlovsk of a bridge loan and guarantee fee
- The guarantee structure of the new facility is on more favourable terms than the ICBC facility, providing IRC with a more manageable repayment schedule in line with the ramp up of its K&S mining operations

New \$125m convertible bond offering and redemption of \$100m convertible bonds due 2020

- In June 2019, the Company announced the redemption of its \$100m convertible bonds maturing 2020 and successful placement of new 5-year \$125m convertible bonds maturing 2024
- The new convertible bonds carry a lower coupon of 8.25% and provide for a longer maturity profile

Credit agencies rating upgrades

- In August 2019, Fitch Ratings upgraded its Long-Term Issuer Default Rating and senior unsecured rating to 'B-' from 'CCC' with a Positive Outlook
- In October 2019, S&P Global Ratings upgraded Petropavlovsk's Outlook to Positive, affirming its Brating and highlighting the progress which the Company has made over the past 12 months

Subsequent Events

- Danila Kotlyarov was appointed as Chief Financial Officer on 1 February 2020, replacing Alexey Dubynin. He was subsequently appointed to the Board as an Executive Director on 21 April 2020
- Mr Kotlyarov holds a BA in Management from Moscow State University and a MA in International Economics from the Moscow State Institute of International Relations (MGIMO)
- He is a fellow member of the Association of Chartered Certified Accountants (ACCA), Chartered Financial Analyst (CFA) and a member of Hong Kong and Russia Associations of Financial Analysts

New major shareholder and appointment of Non-Executive Director

- Following its purchase of Aeon Mining Ltd's shareholding, announced on 5 February 2020, Uzhuralzoloto Group of Companies ("UGC") became Petropavlovsk's largest shareholder
- UGC is a leading privately-owned Russian gold producer with established mining operations and development assets located in Chelyabinsk Region, Krasnoyarsk Territory and the Republic of Khakassia
- Mr Maxim Kharin, Chief Financial Officer and Chairman of the Board at UGC was nominated to the Board of Petropavlovsk, with his appointment reviewed by the Nominations Committee and approved by the Board, and became a Non-Executive Director on 21 April 2020

Preliminary Agreement with Stocken Board AG for the proposed termination of the IRC guarantees with disposal of 29.9% IRC shareholding

 On 18 March 2020, Petropavlovsk entered into a preliminary agreement with Stocken Board AG, that may lead to the Company's disposal of a 29.9% shareholding in IRC for \$10m, contingent on the termination and release of Petropavlovsk from all loan guarantees given to Gazprombank in relation to IRC

Promotion to the FTSE 250 Index

 On 23 March 2020, the Company joined the FTSE 250 Index, which is expected to increase its stock market profile and share trading liquidity

Option to acquire outstanding 25% interest in TEMI LLC

- In May 2019, Petropavlovsk entered into an option agreement with Agestinia Trading Limited, exercisable up to 21 May 2021, to acquire 25% of TEMI LLC (TEMI) and to increase the Company's ownership to 100%
- TEMI holds licences (c.1,000km²) relating to substantial non-refractory as well as refractory reserves and resources located near to the Albyn mine and processing plant, one of the Company's principal mining operations
- Non-refractory reserves are expected to be suitable for processing through Albyn's processing plant and are scheduled to become the main feed source once mining operations at Albyn are exhausted during 2020. First production from Elginskoye is planned in H2 2020
- The Company will review the possibility of exercising its option over the year ahead

Change of external auditor

- Following a competitive tender process overseen by the Board's Audit Committee,
 PricewaterhouseCoopers LLP ("PwC") has been invited to become the Company's statutory external auditor commencing the year ending 31 December 2020
- PwC's appointment is subject to shareholder approval at the forthcoming Annual General Meeting, due to be held on 30 June 2020
- Deloitte LLP, having been the Company's auditors since 2009, will resign following completion of the audit for the year ended 31 December 2019

2020 Guidance

Production: on track to meet the full year target of 620 – 720koz Au in 2020 based on Q1 2020 production

- Costs: TCC⁺ guidance of \$700 \$800/oz excluding third parties concentrate as the pricing of concentrate depends on highly volatile gold price
- Capital expenditure: expected to range from \$70m to \$80m in 2020 which includes completion of the Pioneer flotation plant, sustaining capital expenditure* and exploration costs

Q1 2020 Operational Highlights

Gold production

 73% increase in gold produced to 186.2koz (Q1 2019: 107.7koz), of which 115.4koz (62%) came from processing refractory gold at the POX Hub

Production by Asset (koz)	Q1 2020	Q1 2019
JSC Pokrovskiy Mine	110.7	21.9
Pioneer	26.4	21.9
Third party concentrate (POX Hub)	84.2	-
LLC Malomirskiy Rudnik (Malomir)	35.2	44.5
LLC Albynskiy Rudnik (Albyn)	40.4	41.3
Total Group	186.2	107.7

Responsible Business in Q1 2020

- Zero fatal accidents during the quarter among Group's employees and contractors
- 25% improvement in the Group's Lost Time Injury Frequency Rate ("LTIFR") to 0.98 (Q1 2019: 1.31)
- As a result of the Group's increased emphasis on ESG practices, there was a significant improvement in environmental performance metrics
- On a per ounce gold produced basis, a measure of intensity, improvements included:
 - 49% decline in greenhouse gas ("GHG") emissions;
 - 52% reduction in energy consumption; and
 - 11% improvement in water consumption

Metric	Units	Q1 2020	Q1 2019
LTIFR ⁽¹⁾	-	0.98	1.31
GHG emissions	Tonne CO₂e/oz	0.57	1.14
Water consumption	m³/oz	45.5	51.4
Energy consumption	GJ/oz	6.7	13.9
Environmental incidents (2)	Number	0	0

⁽¹⁾ LTIFR excludes contractors

(2) Environmental incidents denotes Category 2 (moderate) and Category 3 (serious) environmental incidents

 During the quarter, fire safety audits were held across the Group's operations in preparation for the high alert season

^{*}See "The Use and Application of Alternative Performance Measures (APMs)" section for further information on our APMs

- Anti-Bribery and Speak-up policies were approved and adopted as part of the Company's strengthened approach to Business Ethics and Human Rights
- In March 2020, a public consultation on the Environmental Impact Assessment of the Katrin pit at Pioneer was held and was attended by representatives of local communities, an NGO and local administration staff

IRC Update

IRC is a vertically integrated iron ore concentrate producer in the Russian Far East, listed on the Hong Kong Stock Exchange (ticker: 1029.HK). Petropavlovsk is a major IRC shareholder (31.1%) and acts as guarantor for IRC's \$240m loan facility with Gazprombank. In accordance with IAS 28, IRC is treated as an investment in associate.

The following selected summary is based on the IRC Annual Results for the year ended 31 December 2019.

FY 2019 Financial Highlights

- Revenue (after hedging) increased 17% to \$177.2m (2018: \$151.5m)
- EBITDA (excluding currency movements) increased 39% to \$33.3m (2018: \$23.9m)
- Net loss of \$38.7m (2018: Profit of \$68.2m)
- During 2019, a total of \$30.9m was paid to Gazprombank as principal and interest in relation to the \$240m loan facilities, of which c. \$225m was outstanding at the end of 2019

FY 2019 Operations Highlights

- K&S operated at 81% capacity in 2019, producing a record 2,576kt of iron ore concentrate (2018: 2,235kt)
- Sales increased 11% to 2,464kt (2018: 2,224kt)
- Refinancing of ICBC loan completed, with new Gazprombank facilities, providing longer repayment terms in line with the ramp up of its K&S mining operations

In addition to the full year 2019 results, the following selected summary is based on IRC's Q1 2020 trading update for the three months ended 31 March 2020.

Q1 2020 Operations Highlights

- K&S operated at c.86% of designed capacity, producing a record 671kt of iron ore concentrate (Q1 2019: 523kt)
- Sales increased 26% to 663kt (Q1 2019: 527kt)
- Q1 2020 iron ore prices remained stable with the 65% Fe averaging \$103 per tonne, \$5 per tonne higher than Q4 2019, with the price spread between high-grade and low-grade iron ores widening at the time of the announcement
- Weakness in the Russian Rouble has had a positive impact on IRC's operating margins

Balance Sheet

- During Q1 2020, \$9.8m was paid to Gazprombank as principal and interest in accordance with the repayment schedule
- As at 31 March 2020, IRC's total debt outstanding was \$219.4m

COVID-19

 No material impact on IRC's operations from COVID-19 outbreak, with measures taken to support prevention of COVID-19 at its operations

For further details of both announcements, please refer to http://www.ircgroup.com.hk/en/index.php

CEO's Statement

"In 2019 Petropavlovsk made significant steps towards its strategic goals of becoming one of the leading gold producers in Russia and creating shareholder value through modern proven technologies based on our industry-leading research and development capabilities. The smooth and efficient ramp up of the POX Hub resulted in a substantial increase in gold production and cash flow from our assets. This significantly strengthened our balance sheet alongside the refinancing of our convertible bonds and IRC loan facilities.

This transformative year demonstrated that our POX technology can produce profitable ounces from some of the most challenging ores in Russia. The Company's significant investment in this area is now bearing fruit and our POX Hub (which is one of only two pressure oxidation facilities in Russia) has accounted for c.35% of our total production last year. Our POX Hub successfully produced ounces not only from Malomir concentrates, but also from high-grade third-party refractory concentrates from other parts of Russia and Kazakhstan demonstrating the capability to efficiently process the country's abundant refractory ores, placing the Company in a very competitive position.

The foundation for our future organic growth will come from the significant investment in and development of our producing assets. During 2019, Pioneer saw the commencement of construction of its flotation circuit which will transform the mine as it moves to mining the significant refractory ores on this licence area. Optimisation of the Malomir flotation plant has improved the scale of our production as well as the quality and grade of our concentrates, while Albyn has seen significant investment in accessing the Elginskoye deposit, which comes on stream as the current open pit reaches the end of its life.

Beyond the operational upturn from our assets, Petropavlovsk has also substantially strengthened its Board with the appointment of Charlotte Philipps and Katia Ray as independent non-executive directors, ensuring the composition of our Board fully complies with the strictest codes of UK and international Governance.

These positive developments in 2019 have assisted Petropavlovsk's intention to deliver value to all of its stakeholders, which saw the start of the re-rating process of its equity and debt during the second half of 2019 and into 2020, which has seen your Company re-established as a constituent of the FTSE 250 index.

Despite our many successes in 2019, there are still a number of challenges ahead. Maintaining the health and safety of all our employees in the face of the COVID-19 global pandemic is of critical importance. By harnessing the dedication and skills of our employees, the careful management of our reserve and resource base of over 21Moz of gold, and maintaining the momentum of relieving the pressure of our debt liabilities on our balance sheet through delivering strong growth in cash flows and profitability, I and the Board remain confident that Petropavlovsk will continue to build a growing and sustainable business for many years to come."

Sustainability Day

Petropavlovsk is planning a Sustainability Workshop to be held in London during Q3 2020. The event will focus on the Company's long track record of sustainability reporting, current initiatives and future targets.

Results Webcast

A presentation will be webcasted today at 08:30am BST and can be accessed via this URL, from which a recording will also be made available:

https://www.lsegissuerservices.com/spark/Petropavlovsk/events/32b4a71b-2d68-4be5-ad8b-557a374c11d8

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This announcement contains inside information for the purposes of Article 7 of Regulation (EU) No 596/2014.

Cautionary note on forward-looking statements

This release may include statements that are, or may be deemed to be, "forward-looking statements". These forward-looking statements can be identified by the use of forward-looking terminology, including the terms "believes", "estimates", "plans", "projects", "anticipates", "expects", "intends", "may", "will" or "should" or, in each case, their negative or other variations or comparable terminology, or by discussions of strategy, plans, objectives, goals, future events or intentions. These forward- looking statements include all matters that are not historical facts. They appear in a number of places throughout this release and include, but are not limited to, statements regarding the Group's intentions, beliefs or current expectations concerning, among other things, the future price of gold, the Group's results of operations, financial position, liquidity, prospects, growth, estimation of mineral reserves and resources and strategies, and exchange rates and the expectations of the industry.

By their nature, forward-looking statements involve risk and uncertainty because they relate to future events and circumstances outside the control of the Group. Forward-looking statements are not guarantees of future performance and the development of the markets and the industry in which the Group operates may differ materially from those described in, or suggested by, any forward-looking statements contained in this release. In addition, even if the development of the markets and the industry in which the Group operates are consistent with the forward-looking statements contained in this release, those developments may not be indicative of developments in subsequent periods. A number of factors could cause results and/or developments to differ materially from those expressed or implied by the forward-looking statements including, without limitation, general economic and business conditions, demand, supply and prices for gold and other long-term commodity price assumptions (and their effect on the timing and feasibility of future projects and developments), trends in the gold mining industry and conditions of the international gold markets, competition, actions and activities of governmental authorities (including changes in laws, regulations or taxation), currency fluctuations (including as between the US Dollar and Rouble), the Group's ability to recover its reserves or develop new reserves, changes in its business strategy, any litigation, and political and economic uncertainty. Except as required by applicable law, rule or regulation (including the Listing and Disclosure Guidance and Transparency Rules), the Group does not undertake any obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Past performance cannot be relied on as a guide to future performance. The content of websites referred to in this announcement does not form part of this announcement.

The financial information set out in this release does not constitute the Company's statutory accounts for the years ended 31 December 2019 or 2018 but is derived from those accounts. Statutory accounts for 2018 have been delivered to the Registrar of Companies and those for 2019 will be delivered following the Company's annual general meeting. The auditors have reported on those accounts: their reports were unqualified, did not draw attention to any matters by way of emphasis and did not contain statements under s498(2) or (3) of the Companies Act 2006.

FY 2019 CFO Statement

Note: Figures may not add up due to rounding

Financial Highlights

		2019	2018 ^(c)
Gold produced	'000oz	517.3	422.3
Gold sold	'000oz	514.0	369.6
Group revenue	US\$ million	741.6	499.8
Average realised gold price	US\$/oz	1,346	1,263
Average LBMA gold price afternoon fixing	US\$/oz	1,393	1,269
Total Cash Costs [♦] (a), (c)	US\$/oz	749	678
All-in Sustaining Costs [♦] (b), (c)	US\$/oz	1,020	1,079
All-in Costs (b)	US\$/oz	1,103	1,332
Underlying EBITDA ^{♦ (c)}	US\$ million	264.8	182.7
Operating profit	US\$ million	115.4	126.6
Profit before tax	US\$ million	52.9	82.4
Profit for the year	US\$ million	25.7	25.9
Profit for the year attributable to equity			
shareholders of Petropavlovsk PLC	US\$ million	26.9	24.5
Basic profit per share	US\$	0.01	0.01
Cash generated from operations before			
working capital changes	US\$ million	250.5	162.3
Net cash from operating activities	US\$ million	95.4	264.2

(a) Calculation of Total Cash Costs ♦ ("TCC") is set out in the section Hard rock mines below.

(b) All-in Sustaining Costs ◆ ("AISC") and All-in Costs ◆ ("AIC") are calculated in accordance with guidelines for reporting All-in Sustaining Costs ◆ and All-in Costs ◆ published by the World Gold Council. Calculation is set out in the section All-in Sustaining Costs ◆ and All-in Costs ◆ below.

⁽c) Following a review of the nature of the deferred stripping costs the Group has made a reclassification of deferred stripping costs balance from the Inventory balance into the Mining assets within Property, plant and equipment. Comparative information on TCC, AISC and EBITDA for 2018 have been re-calculated accordingly to reflect the effect of the aforementioned re-classification.

	31 December	31 December
	2019	2018
	US\$ million	US\$ million
Cash and cash equivalents	48.2	26.2
Notes ^(c)	(500.4)	(499.0)
Convertible bonds (d)	(109.1)	(95.2)
Net Debt ◆	(561.3)	(568.0)

⁽d) US\$500 million Guaranteed Notes due on 14 November 2022 at amortised cost.

Revenue

	2019 US\$ million	2018 US\$ million
Revenue from hard rock mines	692.6	470.7
Revenue from other operations	49.0	29.1
	741.6	499.8

Group revenue during the period was US\$741.6 million, 48% higher than the US\$499.8 million achieved in 2018.

Revenue from hard rock mines during the period was U\$\$692.6 million, 47% higher than the U\$\$470.7 million achieved in 2018. Gold remains the key commodity produced and sold by the Group, comprising 93% of total revenue generated in 2019. The physical volume of gold sold from hard rock mines increased by 39% from 369,611oz in 2018 to 514,005 oz in 2019. The average realised gold price increased by 7% from U\$\$1,263/oz in 2018 to U\$\$1,346/oz in 2019. The average realised gold price includes a U\$\$(61)/oz effect from hedge arrangements (2018: U\$\$(9)/oz).

⁽e) US\$125 million convertible bonds due on 03 July 2024 at amortised cost.

[•] Go to "The Use and Application of Alternative Performance Measures (APMs)" section for further information on our APMs.

Hard rock mines sold 56,568oz of silver in 2019 at an average price of US\$15/oz, compared to 54,746oz in 2018 at an average price of US\$15/oz.

Revenue generated as a result of third-party work by the Group's in-house service companies was US\$49.0 million in 2019, a US\$19.9 million increase compared to US\$29.1 million in 2018. This revenue is substantially attributable to sales generated by the Group's engineering and research institute, Irgiredmet, primarily through engineering services and the procurement of materials, consumables and equipment for third parties, which comprised US\$45.1 million in 2019 compared to US\$25.1 million in 2018.

Cash flow hedge arrangements

In order to increase certainty in respect of a significant proportion of its cash flows, the Group has entered into a number of gold forward contracts.

Forward contracts to sell an aggregate of 230,000oz of gold matured during the 2019 and resulted in a US\$(31.5) million net cash settlement by the Group (2018: US\$(3.4) million net cash settlement paid by the Group on forward contracts to sell an aggregate of 200,000oz of gold).

The Group constantly monitors the gold price and hedges some portion of production as considered appropriate. All forward contracts were realized in 2019 and the Group had no open hedge positions as at 31 December 2019.

Underlying EBITDA[◆] and analysis of operating costs

	2019	2018
	US\$ million	US\$ million
Profit for the year	25.7	25.9
Add/(less):		
Net (impairment reversals)/ impairment losses on financial		
instruments	(30.8)	28.6
Investment and other finance income	(8.8)	(3.8)
Interest expense	59.9	29.5
Net other finance losses/(gains)	42.2	(10.2)
Foreign exchange losses/(gains)	20.8	(8.5)
Taxation	27.2	56.5
Depreciation	137.8	142.0
Impairment of exploration and evaluation assets	-	12.2
(Reversal of impairment)/impairment of ore stockpiles	(2.8)	18.0
Impairment of gold in circuit	0.1	2.1
Reversal of impairment of mining assets and in-house service	(52.2)	(101.7)
Share of results of associate (c)	45.7	(8.1)
Underlying EBITDA◆	264.8	182.7

⁽a) Group's share of interest expense, investment income, other finance gains and losses, foreign exchange gains/losses, taxation, depreciation and impairment/reversal of impairment recognised by an associate (IRC).

Underlying EBITDA[♦] as contributed by business segments is set out below.

[•] Go to "The Use and Application of Alternative Performance Measures (APMs)" section for further information on our APMs.

[•] Go to "The Use and Application of Alternative Performance Measures (APMs)" section for further information on our APMs.

	2019	2018
	US\$ million	US\$ million
Pioneer	53.3	64.0
Pokrovskiy	-	(0.5)
Malomir	104.2	48.3
Albyn	149.3	104.8
Total Hard rock mines	306.8	216.8
Corporate and other	(41.9)	(34.0)
Underlying EBITDA [◆]	264.8	182.7

Hard rock mines

During this period, the hard rock mines generated Underlying EBITDA of US\$306.8 million compared to US\$216.8 million Underlying EBITDA in 2018.

Total Cash Costs for hard rock mines increased from US\$678/oz in 2018 to US\$749/oz in 2019. The increase in TCC primarily reflects the effect of inflation of certain Rouble denominated costs, costs associated with the ramp-up of the POX Hub and Malomir flotation, application of the full 6% mining tax rate at Pioneer and progressive increase in mining tax rate to 1.2% at Albyn and Malomir. This effect was partially mitigated by higher grades of non-refractory ore processed at Pioneer, Albyn and Malomir and higher recoveries achieved at Pioneer and Malomir as well as by the effect of Rouble depreciation. The increase in physical ounces sold from 369,611oz in 2018 to 514,005oz in 2019 resulted in US\$84.4 million increase in the Underlying EBITDA. The increase in the average realized gold price from US\$1,263/oz in 2018 to US\$1,346/oz in 2019 contributed to a further US\$42.7 million increase in the Underlying EBITDA. This effect was partly mitigated by the increase in TCC. with US\$(36.5) million effect on the Underlying EBITDA.

The key components of the operating cash expenses are wages, electricity, diesel, chemical reagents and consumables, as set out in the table below. The key cost drivers affecting the operating cash expenses are production volumes of ore mined and processed, grades of ore processed, recovery rates, cost inflation and fluctuations in the Rouble to US Dollar exchange rate.

Compared with 2018 there was ongoing inflation of certain Rouble denominated costs, in particular, electricity costs increased by 3% in Rouble terms (no changes in US Dollar terms) and the cost of diesel increased by 12% in Rouble terms (increased by 8% in US Dollar terms). The Rouble depreciated against the US Dollar by 3% in 2019 compared to 2018, with the average exchange rate for the year of RUB64.69: US\$1 in 2019 compared to RUB62.68: US\$1 in 2018, somewhat mitigating the effect of Rouble denominated costs inflation.

Refinery and transportation costs are variable costs dependent on production volume. Mining tax is also a variable cost dependent on production volume and the gold price realised. The Russian statutory mining tax rate is 6%. Under the Russian Federal Law 144-FZ dated 23 May 2016 that introduced certain amendments to the Russian Tax Code, taxpayers who are participants in Regional Investment Projects ("RIP") have the right to apply the reduced mining tax rate provided certain conditions are met. LLC Malomirskiy Rudnik and LLC Albynskiy Rudnik met eligibility criteria and applied 1.2% mining tax rate in 2019 while JSC Pokrovskiy Rudnik applied full mining tax rate in 2019, resulting in US\$15.9 million mining tax expense compared to nil in 2018 when 0% mining tax rate was applied by the Group.

	2019		2018	
	US\$ million	%	US\$ million	%
Staff cost	83.2	21	62.8	24
Materials	86.6	22	87.4	34
Flotation concentrate purchased	74.0	19	-	-
Fuel	43.3	11	39.9	16
Electricity	34.0	8	25.9	10
Other external services	42.3	11	17.9	7
Other operating expenses	32.0	8	21.8	9
	395.5	100	255.7	100
Movement in ore stockpiles, gold in circuit, bullion in				
process, limestone and flotation concentrate				
attributable to gold production	(34.2)		(8.6)	
Total operating cash expenses	361.4		247.1	

	Hard	rock mines		2019	2018
Ī	Pioneer	Malomir	Albyn	Total	Total
	US\$	US\$	US\$	US\$	US\$
Revenue	million	million	million	million	million
Gold	223.2	239.4	229.1	691.7	466.7
Including:	223.2	239.4	229.1	091.7	400.7
Gold from 3d parties concentrate	62.9	-	-	62.9	_
Silver	0.5	0.3	0.1	0.9	0.8
Flotation concentrate	223.7	239.6	229.3	692.6	3.2 470.7
Expenses	220.1	233.0	223.5	032.0	770.7
Operating cash expenses	158.2	128.1	75.0	361.4	247.1
Refinery and transportation	0.3	0.3	0.3	0.9	0.6
Other taxes	1.5	4.2	1.9	7.6	6.2
Mining tax	10.3 41.2	2.8	2.9 48.1	15.9 135.9	141.6
Depreciation Reversal of impairment of mining assets	(42.8)	46.5	48.1	(42.8)	(83.0)
,	(42.0)	_	-	(42.0)	(03.0)
Impairment of exploration and evaluation					10.0
assets Impairment/(reversal of impairment) of	-	-	-	-	12.2
ore stockpiles and gold in circuit	0.6	0.7	(4.0)	(2.7)	20.1
Operating expenses	169.4	182.7	124.2	476.3	344.9
Result of precious metals operations	54.3	56.9	105.1	216.3	125.8
Add/(less):			·		
Depreciation	41.2	46.5	48.1	135.9	141.6
Reversal of impairment of mining assets	(42.8)	-	-	(42.8)	(83.0)
Impairment of exploration and evaluation	` ,			` ,	, ,
assets	-	-	-	-	12.2
Impairment/(reversal of impairment) of	0.0	0.7	(4.0)	(0.7)	00.4
ore stockpiles and gold in circuit	0.6	0.7	(4.0)	(2.7)	20.1
Segment EBITDA◆	53.3	104.2	149.3	306.8	216.8
District of the Control of the Contr	400.000	470 704	470.047	E4.4.00E	000 044
Physical volume of gold sold, oz	163,398	179,791	170,817	514,005	369,611
Including:					
Physical volume of gold sold from 3d	42 442			42 442	
parties concentrate, oz	42,442	-	-	42,442	-
Cash costs					
Operating cash expenses	158.2	128.1	75.0	361.4	247.1
Refinery and transportation	0.3	0.3	0.3	0.9	0.6
Other taxes	1.5	4.2	1.9	7.6	6.2
Mining tax	10.3	2.8	2.9	15.9	
Operating cash costs	170.3	135.4	80.0	385.8	254.0
Deduct: co-product revenue	(0.5)	(0.3)	(0.1)	(0.9)	(8.0)
Deduct: cost of flotation concentrate	-	-	-	-	(2.6)
Total Cash Costs*	169.9	135.2	79.9	384.9	250.6
Including:					
Total cash costs from 3d parties					
concentrate	53.4	-	-	53.4	-
TCC [♦] , US\$/oz	1,040	752	468	749	678

[•] Go to "The Use and Application of Alternative Performance Measures (APMs)" section for further information on our APMs.

AISC[♦] decreased from US\$1,079/oz in 2018 to US\$1,020/oz in 2019. The decrease in AISC[♦] primarily reflects reversal of impairment of non-refractory ore stockpiles at Albyn as well as increase in physical ounces sold in 2019 with an aggregate of sustaining exploration and capital expenditures related to the existing mining operations and underground mining projects at Pioneer and Malomir, Malomir flotation plant, and capitalized stripping expenditure during the period remaining at approximately the same level as in 2018. This effect was partially offset by the increase in TCC.

AIC* decreased from US\$1,332/oz in 2018 to US\$1,103/oz in 2019, reflecting the decrease in AISC* explained above, decrease in Capital Expenditure* in relation to the POX project, with POX Hub commissioned during the period and Pioneer flotation plant in development, as well as no perspective stripping expenditure capitalized in the period.

	На	Hard rock mines 2019			
	Pioneer US\$ million	Malomir US\$ million	Albyn US\$ million	Total US\$ million	Total US\$ million
Physical volume of gold sold, oz	163,398	179,791	170,817	514,005	369,611
Total Cash Costs◆	169.9	135.2	79.9	384.9	250.6
TCC [♦] , US\$/oz	1,040	752	468	749	678
Impairment/(reversal of impairment) of ore stockpiles and gold in circuit Adjusted operating costs	0.6 170.4	0.7 135.9	(4.0) 75.9	(2.7)	20.1 270.7
Central administration expenses Capitalised stripping Close down and site restoration Sustaining exploration expenditures	16.7 14.5 0.2 4.0	18.4 12.7 0.2 0.1	17.5 - 0.6 0.0	52.5 27.1 1.1 4.1	39.2 33.0 1.2 18.5
Sustaining Capital Expenditure All-in Sustaining Costs	16.9 222.7	16.5 183.7	23.9 117.9	57.2 524.3	36.1 398.7
All-in Sustaining Costs [♦] , US\$/oz	1,363	1,022	690	1,020	1,079
Exploration expenditure Capital Expenditure Capitalised stripping All-in Costs	0.7 22.2 - 245.5	1.1 10.2 - 195.0	8.4 - - 126.3	10.1 32.4 - 566.8	3.1 76.7 14.0 492.5
All-in Costs [♦] , US\$/oz	1,503	1,085	739	1,103	1,332

[•] Go to "The Use and Application of Alternative Performance Measures (APMs)" section for further information on our APMs.

Corporate and other

Corporate and other operations contributed US\$(41.9) million to Underlying EBITDA[◆] in 2019 compared to US\$(34.0) million in 2018. Corporate and other operations primarily include central administration function, the results of in-house service companies and related charges, and the Group's share of results of its associate IRC.

The Group has corporate offices in London, Moscow and Blagoveshchensk, which together represent the central administration function. Central administration expenses increased by US\$13.3 million from US\$39.2 million in 2018 to US\$52.5 million in 2019.

The Group recognised US\$12.0 million share of IRC losses and a further US\$23.4 million impairment of investment in IRC (2018: US\$15.5 million share of profit generated by IRC, including US\$28.1 million effect from partial reversal of impairment at K&S mine and US\$(5.7) million impairment of investment in IRC). IRC contributed US\$10.3 million to the Group's Underlying EBITDA* in 2019.

Impairment review

Impairment of mining assets

The Group undertook a review of impairment indicators and impairment reversal indicators of the tangible assets attributable to its gold mining projects and supporting in-house service companies. Detailed calculations of recoverable amounts, which are value-in-use calculations based on discounted cash flows, were prepared which concluded no impairment was required as at 31 December 2019 and 2018.

Having considered the excess of estimated recoverable amounts over the carrying values of the associated assets on the statement of financial position as at 31 December 2019 and taking into consideration removed uncertainty connected with the timing of the final construction and performance of the POX hub, the Directors concluded on the following:

- A reversal of impairment previously recorded against the carrying value of the assets that are part of the Pioneer CGU would be appropriate. Accordingly, a pre-tax impairment reversal of US\$43.5 million (being a post-tax impairment reversal of US\$34.8 million) has been recorded against the associated assets within property, plant and equipment. The aforementioned impairment reversal takes into consideration the effect of depreciation attributable to relevant mining assets and intra-group transfers of previously impaired assets to Pioneer.
- A further reversal of impairment previously recorded against the carrying value of the assets of the supporting inhouse service companies would be appropriate. Accordingly, a pre-tax impairment reversal of US\$9.4 million (being a post-tax impairment reversal of US\$7.8 million) has been recorded against the associated assets within property, plant and equipment. The aforementioned impairment reversal takes into consideration the effect of depreciation attributable to relevant assets and intra-group transfers of previously impaired assets.

As at 31 December 2018, the Group recognised impairment reversals at the Malomir and Albyn CGUs of US\$83.0 million (US\$66.4 million post-tax) and US\$18.7 million (US\$15.2 million post-tax), respectively.

The key assumptions which formed the basis of forecasting future cash flows and the value in use calculation are set out below:

	2019	2018
Long-term real gold price	US\$1,400/oz	US\$1,300/oz
Discount rate (a)	7.0%	8.5%
RUB: US\$ exchange rate	RUB66 : US\$1	RUB67 : US\$1

(a) Being the post-tax real weighted average cost of capital, equivalent to a nominal pre-tax discount rate of 8.7% (2018: 12.5%)

Impairment of exploration and evaluation assets

Go to "The Use and Application of Alternative Performance Measures (APMs)" section for further information on our APMs.

As at 31 December 2019, the Group performed a review of its exploration and evaluation assets and concluded no impairment was required (31 December 2018: the Group performed a review of its exploration and evaluation assets and concluded to suspend exploration at the Flanks of Malomir and surrender the relevant licences. An aggregate impairment charge of US\$12.2 million was recorded against associated exploration and evaluation assets).

As at 31 December 2019, all exploration and evaluation assets in the statement of financial position related to the areas adjacent to the existing mines with ongoing drilling and technical studies being performed.

Investment and other finance income

	2019	2018
	US\$ million	US\$ million
Investment income	3.2	3.8
Guarantee fee income (a)	5.6	-
	8.8	3.8

⁽a) Guarantee fee income under Gazprombank Guarantee arrangements, as set out in section "Corporate activities" below.

The Group recognised US\$1.8 million interest income on loans granted and US\$1.4 million interest income on cash deposits with banks.

	2019 US\$ million	2018 US\$ million
Interest expense	71.6	62.8
Interest capitalised	(12.3)	(33.7)
Other	0.6	0.4
	59.9	29.5

Interest expense for the year comprised US\$42.0 million of effective interest on the Notes, US\$13.0 million of effective interest on the Convertible Bonds, US\$16.0 million of interest on prepayments on gold sale agreements and US\$0.6 million interest on finance lease (2018: US\$41.9 million of effective interest on the Notes, US\$12.6 million of effective interest on the Convertible Bonds, US\$1.1 million of effective interest on bank facilities and US\$7.2 million of interest on prepayments on gold sale agreements).

As the Group continued with completion of the POX Hub, this project met eligibility criteria for borrowing costs capitalisation under IAS 23 "Borrowing Costs". US\$12.3 million of interest expense was capitalised within property, plant and equipment (2018: US\$33.7 million interest capitalised within property, plant and equipment). With all four autoclaves of the POX Hub now fully functional, interest capitalisation in relation to POX Hub ceased in December 2019, with increase in net interest expense from December 2019 onwards. Construction of the flotation line at Pioneer met eligibility criteria for borrowing costs capitalization with relevant interest to be capitalized going forward.

Net other finance gains/(losses)

Net other finance losses for the year totalled US\$(42.2) million compared to US\$10.2 million of net other finance gains in 2018. Key elements of other finance gains and losses this period include:

- US\$(31.1) million fair value loss from re-measurement of the conversion option of the convertible bonds;
- US\$(11.2) million loss on repurchase of the Existing Bonds as set out in section "Corporate activities" below;
- US\$3.6 million gain from re-measurement of receivable from IRC under ICBC Guarantee arrangements to fair value as set out in section "Corporate activities" below;
- US\$(2.0) million fair value loss on the call option to acquire 25% interest in the Group's subsidiary LLC TEMI from its current shareholder as set out in section "Corporate activities" below;
- US\$(1.5) million net loss on other items.

Net impairment reversals/(impairment losses) on financial instruments

In 2019, the Group recognised US\$2.3 million revesal of impairment of financial assets (2018: US\$3.2 million impairment losses of financial assets) and net of US\$28.5 million reversal of provision for expected credit losses under Gazprombank and ICBC guarantee arrangements (2018: US\$25.5 million provision for expected credit losses under ICBC guarantee arrangements), as set out in section "Corporate activities" below.

Taxation

	2019	2018
	US\$ million	US \$ million
Tax charge	27.2	56.5

The Group is subject to corporation tax under the UK, Russia and Cyprus tax legislation. The statutory tax rate for 2019 was 19.0% in the UK and 20% in Russia. Under the Russian Federal Law 144-FZ dated 23 May 2016 taxpayers who are participants in Regional Investment Projects ("RIP") have the right to apply the reduced corporation tax rate over the period until 2027, subject to eligibility criteria. In 2019 and 2018, LLC Albynskiy Rudnik has received tax relief as a RIP participant and was entitled to the reduced statutory corporation tax rate of 17%. In 2019 LLC Malomirskiy Rudnik has received tax relief as a RIP participant and was entitled to the reduced statutory corporation tax rate of 17%.

The tax charge for the year arises primarily related to the Group's gold mining operations and is represented by a current tax charge of US\$29.7 million (2018: US\$19.9 million) and a deferred tax credit, which is a non-cash item, of US\$2.4 million (2018: deferred tax charge of US\$36.6 million). Included in the deferred tax credit in 2019 is a US\$20.4 million credit (2018: US\$30.6 million charge) foreign exchange effect which primarily arises because the tax base for a significant portion of the future taxable deductions in relation to the Group's property, plant and equipment are denominated in Russian Roubles, whilst the future depreciation charges associated with these assets will be based on their US Dollar carrying value.

During the period, the Group made corporation tax payments in aggregate of US\$32.7 million in Russia (2018: corporation tax payments in aggregate of US\$5.0 million in Russia).

Earnings per share

	2019	2018
Profit for the year attributable to equity holders of		
Petropavlovsk PLC	US\$26.9 million	US\$24.5 million
Weighted average number of Ordinary Shares	3,309,193,559	3,305,069,755
Basic profit per ordinary share	US\$0.01	US\$0.01

Basic profit per share for 2019 was US\$0.01 (2018: basic profit per share was US\$0.01). The total number of Ordinary Shares in issue as at 31 December 2019 was 3,310,210,281 (31 December 2018: 3,307,151,712).

Financial position and cash flows

	31 December	31 December
	2019	2018
	US\$ million	US\$ million
Cash and cash equivalents	48.2	26.2
Notes (a)	(500.4)	(499.0)
Convertible bonds (b)	(109.1)	(95.2)
Net Debt [®]	(561.3)	(568.0)

⁽a) US\$500 million Guaranteed Notes due on 14 November 2022 at amortised cost.

⁽b) US\$125 million convertible bonds due on 03 July 2024 at amortised cost.

	2019	2018
	US\$ million	US\$ million
Net cash from operating activities	95.4	264.2
Net cash used in investing activities (c)	(84.7)	(233.5)
Net cash from/(used in) financing activities	8.9	(13.0)

⁽c) Including US\$103.8 million Capital Expenditure (2018: US\$134.4 million).

Key movements in cash and Net Debt*

	Cash	Debt	Net Debt*
	US\$ million	US\$ million	US\$ million
As at 1 January 2019	26.2	(594.2)	(568.0)
Net cash generated by operating activities before working capital changes	250.5		
Decrease in working capital (d)	(61.2)		
Corporation tax paid	(32.7)		
Capital Expenditure [◆]	(103.8)		
Capitalized stripping	(27.1)		
Repayment of loans granted to an associate	56.2		
Issue of Bonds, net of transaction costs	120.6	(107.8)	
Repurchase of the Existing Bonds	(108.0)	96.8	
Interest accrued		(55.0)	
Interest paid	(67.2) ^(e)	50.7	
Payment for the call option to acquire non-controlling 25% interest in the Group's subsidiary LLC TEMI	(13.0)		
ICBC Guarantee fee	6.0		
Interest received	3.3		
Other	(1.6)		
As at 31 December 2019	48.2	(609.5)	(561.3)

⁽d) Including an aggregate of US\$187.4 million advance payments received from Gazprombank and Sberbank outstanding as at 31 December 2019. Advance payments are to be settled against physical delivery of gold produced by the Group in regular intervals over the period of up to twelve months from the reporting date based on the sales price prevailing at delivery that is determined with reference to LBMA fixing.

⁽e) Including US\$16.0 million interest paid in relation to advance payments from Gazprombank and Sberbank.

[•] Go to "The Use and Application of Alternative Performance Measures (APMs)" section for further information on our APMs.

Capital Expenditure

The Group invested an aggregate of US\$103.8 million in 2019 compared to US\$134.4 million in 2018. The key areas of focus in 2019 were on the POX project completion, exploration and development to support the underground mining at Pioneer and Malomir, expansion of tailings dams at Pioneer and Albyn and ongoing exploration related to the areas adjacent to the ore bodies of the Group's main mining operations. The Group capitalised US\$12.3 million of interest expense incurred in relation to the Group's debt into the cost of the POX Hub, Malomir flotation and Pioneer flotation (2018: US\$33.7 million into the cost of the POX Hub and Malomir flotation).

	Exploration expenditure	Development expenditure and other CAPEX*	Total CAPEX*
	US\$ million	US\$ million	US\$ million
POX ^(a)	-	17.1	17.1
Pioneer (b),(c)	4.7	29.9	34.6
Malomir ^{(d), (e)}	1.2	14.1	15.2
Albyn ^(f)	8.4	21.6	30.0
Corporate and in-house services	-	6.9	6.9
	14.2	89.6	103.8

- (a) Including US\$17.1 million of development expenditure in relation to the POX Hub which is considered to be non-sustaining Capital Expenditure[♦] for the purposes of calculating AISC[♦] and AIC[♦].
- (b) Including US\$8.8 million of expenditure in relation to the underground mining project at Pioneer to be sustaining Capital Expenditure[◆] for the purposes of calculating AISC[◆] and AIC[◆].
- (c) Including US\$ 15.2 million development expenditure in relation to the Pioneer flotation (including tailing dams) to be non-sustaining Capital Expenditure for the purposes of calculating the AISC* and AIC*.
- (d) Including US\$2.8 million of development expenditure in relation to the underground mining project at Malomir to be sustaining Capital Expenditure[◆] for the purposes of calculating AISC[◆] and AIC[♦].
- (e) Including US\$8.2 million of development expenditure in relation to Malomir flotation (including tailing dams), which is considered to be sustaining Capital Expenditure[♦] for the purposes of calculating AISC[♦] and AIC[♦].
- (f) Including US\$10.1 million of development expenditure in relation to Albyn tailing dams and US\$5.3 million in relation to road between Elginskoye and Albyn processing facilities, which are considered to be sustaining Capital Expenditure for the purposes of calculating AIC

Foreign currency exchange differences

The Group's principal subsidiaries have a US Dollar functional currency. Foreign exchange differences arise on the translation of monetary assets and liabilities denominated in foreign currencies, which for the principal subsidiaries of the Group are the Russian Rouble and GB Pounds Sterling.

The following exchange rates to the US Dollar have been applied to translate monetary assets and liabilities denominated in foreign currencies.

	31 December 2019	31 December 2018
GB Pounds Sterling (GBP:US\$)	0.75	0.78
Russian Rouble (RUB: US\$)	61.91	69.47

The Rouble recovered by 11% against the US Dollar during 2019, from RUB69.47: US\$1 as at 31 December 2018 to RUB61.91: US\$1 as at 31 December 2019. The average year-on-year depreciation of the Rouble against the US Dollar was approximately 3%, with the average exchange rate for 2019 being RUB64.69: US\$1 compared to RUB62.68: US\$1 for 2018. The Group recognised foreign exchange losses of US\$21 million in 2019 (2018: gains of US\$8.5 million) arising primarily on Rouble denominated net monetary assets.

[•] Go to "The Use and Application of Alternative Performance Measures (APMs)" section for further information on our APMs.

Corporate activities

Guarantee over IRC's external borrowings and refinancing of IRC's project finance facility

The Group historically entered into an arrangement to provide a guarantee over its associate's, IRC, external borrowings, the ICBC Facility ('ICBC Guarantee'). At 31 December 2018 the principal amounts outstanding subject to the ICBC guarantee were US\$169.6 million. Under the terms of the arrangement the Group was entitled to receive an annual fee equal to 1.75% of the outstanding amount, which amounted to US\$0.6 million during the period (2018: US\$4.0 million).

In March 2019, IRC has refinanced the ICBC Facility through entering into a US\$240 million new facility with Gazprombank ('Gazprombank Facility'). The facility was fully drawn down during the year ended 31 December 2019 and was used, inter alia, to repay the amounts outstanding under the ICBC Facility in full, the two loans provided by the Group in the equivalent of approximately US\$57 million and part of the guarantee fee of US\$6 million owed by IRC to the Group in respect of the guarantee of the ICBC Facility. At 31 December 2019 the remaining outstanding contractual guarantee fee was US\$5.0 million, which had a corresponding fair value after provision for credit losses of US\$4.4 million and is payable by IRC no later than 31 December 2020 (31 December 2018: outstanding contractual guarantee fee of US\$10.3 million with a corresponding fair value after provision for credit losses of US\$6.8 million).

A new guarantee was issued by the Group over part of the Gazprombank Facility ('Gazprombank Guarantee'), the guarantee mechanism is implemented through a series of five guarantees that fluctuate in value through the eight-year life of the loan, with the possibility of the initial US\$160 million principal amounts guaranteed reducing to US\$40 million within two to three years, subject to certain conditions being met. For the final two years of the Gazprombank Facility, the guaranteed amounts will increase to US\$120 million to cover the final principal and interest repayments. If certain springing recourse events transpire, including default on a scheduled payment, then full outstanding loan balance is accelerated and subject to the guarantee. The outstanding loan principal was US\$225 million as at 31 December 2019. Under the Gazprombank Guarantee arrangements, the guarantee fee receivable is determined at each reporting date on an independently determined fair value basis, which for the year ended 31 December 2019 was estimated at the annual rate of 3.07% for 2019 by reference to the average outstanding principal balance under Gazprombank Facility. The guarantee fee charged for 2019 was US\$5.6 million, with corresponding value of US\$5.0 million after provision for expected credit losses

The following assets and liabilities have been recognised in relation to the ICBC Guarantee and Gazprombank Guarantee as at 31 December 2019 and 31 December 2018:

	31 December 2019	31 December 2018
	US\$ million	US\$ million
Other receivables – ICBC Guarantee	4.4	6.8
Other receivables – Gazpombank Guarantee	5.0	<u>-</u>
Financial guarantee contract – ICBC Guarantee	-	(37.4)
Financial guarantee contract – Gazpombank Guarantee	(8.9)	<u> </u>

The following gains and losses resulting from the aforementioned transactions were recognised during the period:

	2019 US\$ million
Fair value change on ICBC Guarantee fee receivable	3.6
Gazpombank Guarantee fee for the year	5.0
De-recognition of liability under ICBC Guarantee arrangements	37.4
Recognition of liability under Gazpombank Guarantee arrangements	(8.9)
Interest on loans advanced to IRC	1.8
Reversal of provision for expected credit losses following repayment of loans	3.2
advanced to IRC	
	41.1

In May 2019, the Group entered into the option contract to acquire non-controlling 25% interest in LLC TEMI, holder of licenses for the Elginskoye Ore Field and Afanasievskaya Prospective Ore Area, from its shareholder Agestinia Trading Limited for an aggregate consideration of US\$60 million (adjusted to US\$53.5 million if certain conditions are met). The option premium payable is US\$13 million, which was paid during the year ended 31 December 2019. The exercise period of the option is 730 days from 22 May 2019.

The Group employed an independent third-party expert to undertake the valuations of the underlying 25% interest in LLC TEMI and the call option. As at 31 December 2019, the fair value of the derivative financial asset was US\$11.0 million reflecting a loss on re-measurement to fair value of US\$2.0 million and the initial US\$13 million cash payment.

Placement of US\$125 million new convertible bonds and concurrent repurchase of outstanding US\$100 million Convertible Bonds

In July 2019, the Group has issued US\$125 million convertible bonds due 2024. The bonds were issued by the Group's wholly owned subsidiary Petropavlovsk 2010 Limited (the "Issuer") and are guaranteed by the Company. The bonds carry a coupon of 8.25% per annum, payable quarterly in arrears. The bonds are, subject to certain conditions, convertible into fully paid ordinary shares of the Company with an initial exchange price of US\$0.1350, subject to customary adjustment provisions.

Concurrently with the issue of the US\$125 million convertible bonds, the Group also concluded the invitation to repurchase (the "Repurchase") any and all of the outstanding US\$100 million 9.00% convertible bonds due 2020 (the "Existing Bonds"). Holders whose Existing Bonds have been accepted for purchase by the Issuer pursuant to the Repurchase were eligible to receive US\$1,080 per US\$1,000 in principal amount of the Existing Bonds (the "Repurchase Price"). The Issuer also paid, in respect of Existing Bonds accepted for purchase pursuant to the Repurchase, a cash amount representing the accrued but unpaid interest ("Accrued Interest") on each US\$1,000 in aggregate principal amount of Existing Bonds accepted for repurchase from and including 18 June 2019, being the immediately preceding interest payment date applicable to the Existing Bonds, to but excluding the settlement date for the Repurchase (the "Repurchase Settlement Date"). The remaining Existing Bonds were redeemed at the Repurchase Price on 9 July 2019. The Issuer also paid a cash amount representing the Accrued Interest on each US\$1,000 in aggregate principal amount of Existing Bonds from and including 18 June 2019 to redemption. The Existing Bonds were subsequently cancelled by the Issuer.

The US\$11.2 million difference between cash paid to purchase the Existing Bonds and the carrying value of respective debt was recognised as loss on re-purchase of the Existing Bonds.

Going concern

The Group monitors and manages its liquidity risk on an ongoing basis to ensure that it has access to sufficient funds to meet its obligations. Cash forecasts are prepared regularly based on a number of inputs including, but not limited to, forecast commodity prices and the impact of hedging arrangements, the Group's mining plan, forecast expenditure and debt repayment schedules. Sensitivities are run for different scenarios including, but not limited to, changes in commodity prices, cost inflation, different production rates from the Group's producing assets and the timing of expenditure on development projects. This is done to identify risks to liquidity and enable management to develop appropriate and timely mitigation strategies. The Group meets its capital requirements through a combination of sources including cash generated from operations, advances received from customers under prepayment arrangements and external debt.

The Group performed an assessment of the forecast cash flows for the period of at least 12 months from the date of approval of the 2019 Annual Report and Accounts. As at 31 December 2019, the Group had sufficient liquidity headroom. The Group is also satisfied that it has sufficient headroom under a base case scenario for the period to June 2020. The Group has also performed projections under a layered stressed case that is based on a gold price, which is approximately 10% lower than the upper quartile of the average of the market consensus forecasts, processing of third-party concentrate through POX facilities is approximately 10% lower than projected and oxide gold production from underground operations at Pioneer and Malomyr approximately 10% lower than projected, and Russian Rouble: US Dollar exchange rate that is approximately 10% stronger than the average of the market consensus forecasts. This layered stressed case indicates sufficient liquidity for a period of at least 12 months including under downside IRC performance scenarios.

As at 31 December 2019, the Group has guaranteed the outstanding amounts IRC owed to Gazprombank. The outstanding loan principal was US\$225 million as at 31 December 2019 and the facility is subject to an initial US\$160 million guarantee by the Group (see note 26). The assessment of whether there is any material uncertainty that IRC will be able to repay this facility as it falls due is another key element of the Group's overall going concern assessment. IRC projections demonstrate that IRC expects to have sufficient liquidity over the next 12 months and expects to meet its

obligations under the Gazprombank Facility. If a missed repayment under debt or guarantee obligations occurs which, if not remedied by the Group, would result in events of default which, through cross-defaults and cross-accelerations, could cause all other Group's debt arrangements to become repayable on demand.

The directors have also considered the potential impacts of Covid-19 which are described in detail in the Annual Report.

Having taken into account the aforementioned factors, and after making enquiries and considering the uncertainties described above, the Directors have a reasonable expectation that the Group will have adequate resources to continue in operational existence for the foreseeable future, being at least the next 12 months from the date of approval of the 2019 Annual Report and Accounts. Accordingly, they continue to adopt the going concern basis of accounting in preparing these consolidated financial statements.

2020 Outlook

Production is on track to meet the full year target of 620 – 720koz of gold in 2020. The Group expects TCC ◆ in 2020 to be in the range of US\$700 – US\$800/oz excluding third parties concentrate as the pricing of concentrate depends on highly volatile gold price.

^{*}See "The Use and Application of Alternative Performance Measures (APMs)" section for further information on our APMs

FY 2019 Consolidated Annual Financial Statements

PETROPAVLOVSK PLC Consolidated Statement of Profit or Loss For the year ended 31 December 2019

		2019	2018 ^(a)
	note	US\$'000	US\$'000
Group revenue	5	741,589	499,775
Operating expenses	6	(590,853)	(388,643)
Share of results of associate	14	(35,376)	15,480
Operating profit		115,360	126,612
Net impairment reversals/(impairment losses) on financial instruments	9	30,797	(28,634)
Investment and other finance income	9	8,826	3,775
Interest expense	9	(59,854)	(29,520)
Net other finance (losses)/gains	9	(42,190)	10,185
Profit before taxation		52,939	82,418
Taxation	10	(27,246)	(56,489)
Profit for the year		25,693	25,929
Attributable to:			
Equity shareholders of Petropavlovsk PLC		26,883	24,493
Non-controlling interests		(1,190)	1,436
Profit per share			
Basic profit per share	11	US\$0.01	US\$0.01
Diluted profit per share	11	US\$0.01	US\$0.01

⁽a) Impairment losses and impairment reversals on financial instruments for the year ended 31 December 2018 have been presented in a separate line item in the Consolidated Statement of Profit or Loss and the remaining Other finance gains and other finance losses for the year ended 31 December 2018 have been presented on a net basis. See note 2 for details.

PETROPAVLOVSK PLC Consolidated Statement of Comprehensive Income For the year ended 31 December 2019

	2019 US\$'000	2018 US\$'000
DesCt for the coope		
Profit for the year	25,693	25,929
Items that may be reclassified subsequently to profit or loss:		
Exchange differences:		
Exchange differences on translating foreign operations	2,102	(3,183)
Share of other comprehensive loss of associate	(1,084)	(329)
Cash flow hedges:		
Fair value (losses)/gains	(22,652)	20,238
Tax thereon	4,234	(3,743)
Transfer to revenue	31,471	3,419
Tax thereon	(5,865)	(633)
	8,206	15,769
Total comprehensive profit for the year	33,899	41,698
Attributable to:		
Equity shareholders of Petropavlovsk PLC	35,067	40,203
Non-controlling interests	(1,168)	1,495
	33,899	41,698

PETROPAVLOVSK PLC Consolidated Statement of Financial Position At 31 December 2019

	note	31 December 2019	31 December 2018 ^(a)	1 January 2018 ^(a)
		US\$'000	(restated) US\$'000	(restated) US\$'000
Assets		337 333	004000	004 000
Non-current assets				
Exploration and evaluation assets	12	53,123	43,115	53,518
Property, plant and equipment	13	1,209,817	1,144,063	977,314
Investments in associate	14	48,680	85,140	70,890
Inventories	15	60,257	56,805	72,720
Trade and other receivables	16	556	547	8,931
Derivative financial instruments	18	11,022	-	-
Other non-current assets		880	1,177	347
		1,384,335	1,330,847	1,183,720
Current assets		1,001,000		
Inventories	15	307,773	158,856	132,885
Trade and other receivables	16	105,975	66,741	75,830
Loans granted to an associate	26	-	50,966	· -
Current tax assets		5,807	1,653	_
Cash and cash equivalents	17	48,153	26,152	11,415
		467,708	304,368	220,130
Total assets		1,852,043	1,635,215	1,403,850
Liabilities		1,002,040	1,000,210	1,400,000
Current liabilities		(a)		
Trade and other payables	19	(389,041)	(219,845)	(88,333)
Current tax liabilities		(535)	(1,571)	(940)
Borrowings		-	-	(7,137)
Derivative financial instruments	18	(266)	(9,955)	-
Provision for close down and restoration costs	22	-	(804)	(200)
Lease liabilities	23	(5,373)	-	-
		(395,215)	(232,175)	(96,610)
Net current assets		72,493	72,193	123,520
Non-current liabilities				
Borrowings	20	(609,463)	(594,177)	(589,337)
Derivative financial instruments	18	(46,313)	(2,411)	(49,684)
Deferred tax liabilities	21	(112,566)	(113,354)	(72,380)
Provision for close down and restoration costs	22	(36,231)	(20,584)	(20,804)
Financial guarantee contract	26	(8,923)	(37,387)	(8,603)
Trade and other payables	19	-	(33,779)	-
Lease liabilities	23	(7,805)	-	-
		(821,301)	(801,692)	(740,808)
Total liabilities		(1,216,516)	(1,033,867)	(837,418)
Net assets		635,527	601,348	566,432
Equity Share capital	24	40.000	48,963	40.000
Share premium	24	49,003	518,142	48,920 518,142
·		518,142		
Hedging reserve		400	(7,166)	(26,388)
Share based payments reserve		199	(17.000)	144
Translation reserve		(15,878)	(17,980)	(17,500)
Retained earnings		73,605	47,538	32,985
Equity attributable to the shareholders of Petropavlovsk PLC		625,071	589,724	556,303
No. of the Land		40.45	44.004	40.405
Non-controlling interests		10,456	11,624	10,129
Total equity		635,527	601,348	566,432

⁽a) See note 2 for details regarding the restatement.

These consolidated financial statements for Petropavlovsk PLC, registered number 4343841, were approved by the Directors on 26 May 2020 and signed on their behalf by

Sir Roderic Lyne Director Pavel Maslovskiy Director

PETROPAVLOVSK PLC Consolidated Statement of Changes in Equity for the year ended 31 December 2019

			Total attributable	e to equity ho	Iders of Petropa	vlovsk PLC			
			Share based					Non-	
	Share	Share	payments	Hedging	Translation	Retained		controlling	
	capital	premium	reserve	reserve	reserve	earnings/(losses)	Total	interests	Total equity
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
Balance	48,920	518,142	144	(26,388)	(17,500)	32,985	556,303	10,129	566,432
at 1 January 2018									
Impact of adopting IFRS 9	-	-	-	-	2,703	(9,959)	(7,256)	=	(7,256)
Impact of adopting IFRS 15	-	-	-	-	-	58	58	-	58
Total comprehensive income/(loss)	-	-	-	19,222	(3,183)	24,164	40,203	1,495	41,698
Profit for the year	-	-	-	-	-	24,493	24,493	1,436	25,929
Other comprehensive income/(loss)	-	-	-	19,222	(3,183)	(329)	15,710	59	15,769
Deferred share awards	43	-	83	-	-	290	416	-	416
Balance									
at 31 December 2018	48,963	518,142	227	(7,166)	(17,980)	47,538	589,724	11,624	601,348
Total comprehensive income/(loss)	-	-	-	7,166	2,102	25,799	35,067	(1,168)	33,899
Profit for the year	-	-	-	-	-	26,883	26,883	(1,190)	25,693
Other comprehensive income/(loss)	-	-	-	7,166	2,102	(1,084)	8,184	22	8,206
Deferred share awards	40	-	(28)	-	-	268	280	-	280
Balance									
at 31 December 2019	49,003	518,142	199	-	(15,878)	73,605	625,071	10,456	635,527

PETROPAVLOVSK PLC Consolidated Statement of Cash Flows For the year ended 31 December 2019

	note	2019	2018 (restated) (a)
	Hoto	US\$'000	US\$'000
Cash flows from operating activities			
Cash generated from operations	25	189,321	329,814
Interest paid		(67,160)	(60,577)
Guarantee fee received in connection with ICBC facility	26	6,000	-
Income tax paid		(32,723)	(5,024)
Net cash from operating activities		95,438	264,213
Cash flows from investing activities			
Purchase of property, plant and equipment	25	(120,798)	(178,201)
Expenditure on exploration and evaluation assets	12	(10,136)	(3,153)
Proceeds from disposal of property, plant and equipment		111	1,170
Repayment of loans granted/ (loans granted) to an associate	26	56,243	(56,750)
Other loans granted	26	(389)	(210)
Interest received		3,283	3,667
Call option over non-controlling interests	26	(13,000)	-
Net cash used in investing activities		(84,686)	(233,477)
Cash flows from financing activities			
Issue of Bonds, net of transaction cost	20	120,561	-
Repayment of Bonds	20	(108,000)	-
Repayments of borrowings		-	(4,006)
Notes related costs		-	(2,599)
Debt transaction costs paid in connection with bank loans		-	(6,412)
Exercise of the Call Option over the Company's shares	18	(2,215)	-
Funds advanced to the Group under investment agreement with the			-
Russian Ministry of Far East Development	30	8,772	
Funds transferred under investment agreement with the Russian			-
Ministry of Far East Development	30	(8,772)	
Principal elements of lease payments		(1,468)	-
Net cash from/(used in) financing activities		8,878	(13,017)
Net increase in cash and cash equivalents in the period		19,630	17,719
Effect of exchange rates on cash and cash equivalents		2,371	(2,982)
Cash and cash equivalents at beginning of period	17	26,152	11,415
Cash and cash equivalents at end of period	17	48,153	26,152

⁽a) See note 2 for details regarding the restatement.

PETROPAVLOVSK PLC Notes to the Consolidated Financial Statements For the year ended 31 December 2019

1. General information

Petropavlovsk PLC (the 'Company') is a company incorporated and registered in England and Wales. The address of the registered office is 11 Grosvenor Place, London SW1X 7HH.

2. Significant accounting policies

2.1. Basis of preparation and presentation

The consolidated financial statements of Petropavlovsk PLC and its subsidiaries (the 'Group') have been prepared in accordance with International Financial Reporting Standards ('IFRS') as adopted by the European Union, IFRIC Interpretations and the Companies Act 2006. The consolidated financial statements have been prepared under the historical cost convention, as modified by the revaluation of certain financial assets and financial liabilities (including derivative financial instruments) at fair value through profit or loss. The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all years presented, unless otherwise stated.

Going concern

The Group monitors and manages its liquidity risk on an ongoing basis to ensure that it has access to sufficient funds to meet its obligations. Cash forecasts are prepared regularly based on a number of inputs including, but not limited to, forecast commodity prices and the impact of hedging arrangements, the Group's mining plan, forecast expenditure and debt repayment schedules. Sensitivities are run for different scenarios including, but not limited to, changes in commodity prices, cost inflation, different production rates from the Group's producing assets and the timing of expenditure on development projects. This is done to identify risks to liquidity and enable management to develop appropriate and timely mitigation strategies. The Group meets its capital requirements through a combination of sources including cash generated from operations, advances received from customers under prepayment arrangements and external debt.

The Group performed an assessment of the forecast cash flows for the period of at least 12 months from the date of approval of the 2019 Annual Report and Accounts. As at 31 December 2019, the Group had sufficient liquidity headroom. The Group is also satisfied that it has sufficient headroom under a base case scenario for the period to June 2020. The Group has also performed projections under a layered stressed case that is based on:

- a gold price, which is approximately 10% lower than the upper quartile of the average of the market consensus forecasts;
- processing of third-party concentrate through POX facilities is approximately 10% lower than projected and oxide gold production from underground operations at Pioneer and Malomyr approximately 10% lower than projected;
- and Russian Rouble: US Dollar exchange rate that is approximately 10% stronger than the average of the market consensus forecasts.

This layered stressed case indicates sufficient liquidity for a period of at least 12 months including under downside IRC performance scenarios. In selecting these scenarios, the directors have also considered the potential impacts of Covid-19 which are described in detail in the Annual Report.

As at 31 December 2019, the Group has guaranteed the outstanding amounts IRC owed to Gazprombank. The outstanding loan principal was US\$225 million as at 31 December 2019 and the facility is subject to an initial US\$160 million guarantee by the Group (see note 26). The assessment of whether there is any material uncertainty that IRC will be able to repay this facility as it falls due is another key element of the Group's overall going concern assessment. IRC projections demonstrate that IRC expects to have sufficient liquidity over the next 12 months and expects to meet its obligations under the Gazprombank Facility. If a missed repayment under debt or guarantee obligations occurs which, if not remedied by the Group, would result in events of default which, through cross-defaults and cross-accelerations, could cause all other Group's debt arrangements to become repayable on demand.

Having taken into account the aforementioned factors, and after making enquiries and considering the uncertainties described above, the Directors have a reasonable expectation that the Group will have adequate resources to continue in operational existence for the foreseeable future, being at least the next 12 months from the date of approval of the 2019 Annual Report and Accounts. Accordingly, they continue to adopt the going concern basis of accounting in preparing these consolidated financial statements.

Re-classification of deferred stripping costs

The following reclassifications have been made in the Consolidated Statement of Financial Position and Consolidated Statement of Cash Flows regarding the 2018 comparative and opening balances.

Following a review of the nature of the deferred stripping costs balance, the Group has concluded that these costs should had been presented as mining assets under property, plant and equipment. The comparative financial information has been aligned to be on a consistent basis with re-classifications in the Consolidated Statement of Financial Position from inventory current and non-current assets to property, plant and equipment non-current assets of US\$ 47.0 million as at 31 December 2018 and US\$ 39.8 million as at 1 January 2018. As a consequence, a US\$47.0 million reclassification from Net cash from operating activities to Net cash used in investing activities in the Consolidated Statement of Cash Flows for 2018 has been also made.

There is no impact on the Group's consolidated statement of profit or loss, profit per share, retained earnings or net assets for the year ended 31 December 2018.

Other re-classifications

Impairment losses and impairment reversals on financial instruments have been reclassified to be presented in a separate line item in the Consolidated Statement of Profit or Loss. Other finance gains and other finance losses have been presented in the Consolidated Statement of Profit or Loss on a net basis as the Group believes it is more representative since gains and losses relate to similar financial instruments. The comparative financial information for the year ended 31 December 2018 has been aligned to be on a consistent basis with re-classifications from Other finance losses to Net impairment reversals/(impairment losses) on financial instruments of US\$28.6 million and the remaining Other finance losses of US\$3.7 million and Other finance gains of US\$13.9 million presented on a net basis.

Current tax asset has been reclassified to be presented in a separate line item in the Consolidated Statement of Financial Position. The comparative financial information as at 31 December 2018 has been aligned to be on a consistent basis with re-classifications from Trade and other receivables of US\$1.7 million.

2.2. Adoption of new and revised standards and interpretations

As disclosed in note 2 to the Group's consolidated financial statements for the year ended 31 December 2018, IFRS 16 "Leases" was effective for annual periods beginning on or after 1 January 2019 and have been adopted by the Group accordingly. The Group applied the modified retrospective transition approach and has not restated comparative information for the year prior to first adoption of IFRS 16. The impact of the adoption of this standard is disclosed below.

Impact of adoption - IFRS 16 "Leases":

The Group has adopted IFRS 16 using the modified retrospective method of adoption, with the date of initial application as at 1 January 2019, as permitted by transitional provisions of the standard, and has not restated comparatives for the annual period ended on 31 December 2018. The reclassifications and the adjustments arising from the new leasing rules are therefore recognised in the opening balance sheet on 1 January 2019. The Group elected to use the transition practical expedient to not reassess whether a contract is, or contains a lease at 1 January 2019. Instead, the Group applied the standard only to contracts that were previously identified as leases applying IAS 17 and IFRIC 4 at the date of initial application. IFRS 16 does not apply to the lease agreements to explore for or use minerals and similar non-regenerative resources and hence the Group continues to account lease payments associated with these leases as an expense (Note 2.14).

Lessor accounting under IFRS 16 is substantially unchanged from IAS 17. Lessors will continue to classify all leases as either operating leases or finance leases using similar principles as in IAS 17. IFRS 16 has been evaluated not to have any impact for leases where the Group is the lessor.

On adoption of IFRS 16, the Group recognised right-of-use assets and lease liabilities in relation to leases which had previously been classified as operating leases, except for short-term leases and leases of low-value assets. The right-of-use assets for all leases were recognised based on the amount equal to the lease liabilities adjusted for any related prepaid and accrued lease expenses. Lease liabilities were measured at the present value of the remaining lease payments, discounted using the lessee's incremental borrowing rate as of 1 January 2019. The weighted average lessee's incremental borrowing rate applied to the lease liabilities on 1 January 2019 was 9.3%.

The Group also applied the available practical expedients wherein it:

- Used a single discount rate to a portfolio of leases with reasonably similar characteristics;
- Applied the short-term leases exemptions to leases with lease terms that end within 12 months of the date of initial application;
- Used the recognition exemptions for lease contracts for which the underlying asset is of low value (low-value assets);
- Excluded the initial direct costs from the measurement of the right-of-use asset at the date of initial application.

The table below presents a reconciliation from operating lease commitments disclosed as at 31 December 2018 to lease liabilities recognised as at 1 January 2019.

	1 January
	2019 US\$' 000
Operating lease commitments disclosed as at 31 December 2018	1,397
Add: Finance leases liabilities recognised under IAS 17 as at 31 December 2018	46
Add: Extension and termination options reasonably certain to be exercised	1,188
Less: Non-lease components previously included as part of commitments in relation to existing lease	
contracts	(376)
Less: Discounting using the incremental borrowing rate of at the date of initial application	(516)
Lease liabilities recognised as at 1 January 2019	1,739

For the movement in the right-of-use asset and associated lease liabilities during the year ended 31 December 2019 refer to note 23.

Furthermore, the classification of cash flows has changed as operating lease payments under IAS 17 were presented as operating cash flows; whereas under the IFRS 16 model, lease payments are split into a principal and finance cost which will be presented as financing and operating cash flows respectively.

New standards and interpretations that are applicable to the Group, issued but not yet effective for the reporting period beginning 1 January 2019

At the date of approval of these financial statements, the following Standards and Interpretations which have not been applied in these consolidated financial statements were in issue but not yet effective (and in some cases had not yet been adopted by the EU):

- Amendments to References to the Conceptual Framework in IFRS Standards (29 March 2018);
- Amendments to IFRS 3 (October 2018): Definition of Business;
- Amendments to IAS 1 and IAS 8 (October 2018): Definition of Material;
- Amendments to IFRS 7, IFRS 9 and IAS 39 (September 2019): Interest Rate Benchmark Reform.

The Group intends to adopt these new and amended standards and interpretations, if applicable, when they become effective.

IFRIC Interpretation 23 Uncertainty over Income Tax Treatment

The Group has adopted IFRIC 23 for the first time in the current year. The Interpretation addresses the accounting for income taxes when tax treatments involve uncertainty that affects the application of IAS 12 "Income Taxes". It does not apply to taxes or levies outside the scope of IAS 12, nor does it specifically include requirements relating to interest and penalties associated with uncertain tax treatments. The Interpretation requires the Group to:

- determine whether uncertain tax positions are assessed separately or as a group; and
- assess whether it is probable that a tax authority will accept an uncertain tax treatment used, or proposed to be used, by an entity in its income tax filings;
- if yes, the Group should determine its accounting tax position consistently with the tax treatment used or planned to be used in its income tax filings.
- if no, the Group should reflect the effect of uncertainty in determining its accounting tax position using either the most likely amount or the expected value method.

The Group determines whether to consider each uncertain tax treatment separately or together with one or more other uncertain tax treatments and uses the approach that better predicts the resolution of the uncertainty. The Group applies significant judgement in identifying uncertainties over income tax treatments. The Interpretation has not had a material impact on the consolidated financial statements of the Group.

Amendments to References to the Conceptual Framework in IFRS Standards (29 March 2018)

The Conceptual Framework is not a standard, and none of the concepts contained therein override the concepts or requirements in any standard. The purpose of the Conceptual Framework is to assist the IASB in developing standards, to help preparers develop consistent accounting policies where there is no applicable standard in place and to assist all parties to understand and interpret the standards.

The revised Conceptual Framework includes some new concepts, provides updated definitions and recognition criteria for assets and liabilities and clarifies some important concepts.

These amendments had no impact on the consolidated financial statements of the Group.

Amendments to IFRS 3 (October 2018): Definition of a Business

In October 2018, the IASB issued amendments to the definition of a business in IFRS 3 Business Combinations to help entities determine whether an acquired set of activities and assets is a business or not. They clarify the minimum requirements for a business, remove the assessment of whether market participants are capable of replacing any missing elements, add guidance to help entities assess whether an acquired process is substantive, narrow the definitions of a business and of outputs, and introduce an optional fair value concentration test. New illustrative examples were provided along with the amendments.

Since the amendments apply prospectively to transactions or other events that occur on or after the date of first application, the Group will not be affected by these amendments on the date of transition.

Amendments to IAS 1 and IAS 8 (October 2018): Definition of Material

In October 2018, the IASB issued amendments to IAS 1 Presentation of Financial Statements and IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors to align the definition of 'material' across the standards and to clarify certain aspects of the definition. The new definition states that, "Information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements, which provide financial information about a specific reporting entity."

The amendments to the definition of material is not expected to have a significant impact on the Group's consolidated financial statements.

Amendments to IFRS 7, IFRS 9 and IAS 39 (September 2019): Interest Rate Benchmark Reform

The amendments to IFRS 9 Financial Instruments and IAS 39 Financial Instruments: Recognition and Measurement provide a number of reliefs, which apply to all hedging relationships that are directly affected by interest rate benchmark reform. A hedging relationship is affected if the reform gives rise to uncertainties about the timing and or amount of benchmark-based cash flows of the hedged item or the hedging instrument. These amendments had no impact on the consolidated financial statements of the Group as it does not have any interest rate hedges directly linked to interest rate benchmark reform.

2.3. Basis of consolidation

These consolidated financial statements consist of the financial statements of the Company and its subsidiaries as at the reporting date. Subsidiaries are all entities over which the Group has control.

Control is achieved when the Group is exposed, or has rights, to variable returns from its involvement with the subsidiary and has the ability to affect those returns through its power over the subsidiary. Specifically, the Group controls a subsidiary if, and only if, it has all of the following:

- Power over the subsidiary (i.e. existing rights that give it the current ability to direct the relevant activities of the subsidiary).
- Exposure, or rights, to variable returns from its involvement with the subsidiary.
- The ability to use its power over the subsidiary to affect its returns.

When the Group has less than a majority of the voting rights of a subsidiary or similar rights of a subsidiary, it considers all relevant facts and circumstances in assessing whether it has power over the subsidiary including:

- The size of the Group's holding of voting rights relative to the size and dispersion of holdings of the other vote holders;
- Potential voting rights held by the Group, other vote holders or other parties;
- Rights arising from other contractual arrangements; and
- Any additional facts and circumstances that indicate that the Group has, or does not have, the current ability to direct the
 relevant activities at the time that decisions need to be made, including voting patterns at previous shareholders' meetings.

The Company reassesses whether or not it controls a subsidiary if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above.

Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary. Specifically, income and expenses of a subsidiary acquired or disposed of during the year are included in the consolidated statement of income and other comprehensive income from the date the Group gains control until the date when the Group ceases to control the subsidiary.

Inter-company transactions, balances and unrealised gains on transactions between Group companies are eliminated on consolidation. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. Where necessary, adjustments are made to the financial statements of subsidiaries to ensure consistency of accounting policies with the policies adopted by the Group.

Non-controlling interests in the net assets of consolidated subsidiaries are identified separately from the Group's equity therein. The interests of non-controlling shareholders may be initially measured at fair value or at the non-controlling interests' proportionate share of the fair value of the acquiree's identifiable net assets. The choice of measurement is made on an acquisition-by-acquisition basis. Subsequent to acquisition, the carrying amount of non-controlling interests is the amount of those interests at initial recognition plus the non-controlling interests' share of subsequent changes in equity. The recognised income and expense are attributed to non-controlling interests even if this results in the non-controlling interests having a deficit balance.

2.4. Non-controlling interests

The Group treats transactions with non-controlling interests as transactions with equity owners. For purchases from non-controlling interests, the difference between any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

2.5. Investments in associate

An associate is an entity over which the Group is in a position to exercise significant influence but not control or joint control.

Investments in associate are accounted for using the equity method of accounting. Under the equity method of accounting, the investments are initially recognised at cost and adjusted thereafter to recognise the Group's share of the post-acquisition profits or losses of an associate in profit or loss and the Group's share of movements in other comprehensive income of an associate in other comprehensive income.

Losses of an associate in excess of the Group's interest in that associate (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate) are recognised only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate.

When a Group entity transacts with an associate of the Group, unrealised profits and losses are eliminated to the extent of the Group's interest in the relevant associate.

The carrying amount of equity-accounted investments is tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable.

2.6. Foreign currency translation

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the functional currency). For the purpose of the consolidated financial statements, the results and financial position of each Group company are expressed in US Dollars, which is the Group's presentation currency. The functional currency of the Company is the US Dollar.

The rates of exchange used to translate balances from other currencies into US Dollars were as follows (currency per US Dollar):

		Average year		Average year
	As at	ended	As at	ended
	31 December	31 December	31 December	31 December
	2019	2019	2018	2018
GB Pounds Sterling (GBP : US\$)	0.75	0.78	0.78	0.75
Russian Rouble (RUB : US\$)	61.91	64.69	69.47	62.68

In preparing the financial statements of the individual companies, transactions in currencies other than the entity's functional currency (foreign currencies) are translated into the functional currency using the exchange rates prevailing at the dates of the transactions or valuation where items are remeasured. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at the year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in profit or loss. Non-monetary items carried at fair value that are denominated in foreign currencies are translated at the rates prevailing at the date when the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

For the purpose of presenting consolidated financial statements, the assets and liabilities of the Group's foreign operations which have a functional currency other than US Dollars are translated at exchange rates prevailing on the reporting date. Income and expense items are translated at the average exchange rates for the year, unless exchange rates fluctuate significantly during that year, in which case the exchange rates at the date of transactions are used. Exchange differences arising, if any, are recognised in other comprehensive income and expenses and accumulated in equity, with share attributed to non-controlling interests as appropriate. On the disposal of a foreign operation, all of the accumulated exchange differences in respect of that operation attributable to the shareholders of the Company are reclassified to profit or loss.

Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation.

2.7. Exploration and evaluation assets

Exploration and evaluation expenditure incurred in relation to those projects where such expenditure is considered likely to be recoverable through future extraction activity or sale, or where the exploration activities have not reached a stage which permits a reasonable assessment of the existence of reserves, are capitalised and recorded on the statement of financial position within exploration and evaluation assets for mining projects at the exploration stage.

Exploration and evaluation expenditure comprise costs directly attributable to:

- Researching and analysing existing exploration data;
- Conducting geological studies, exploratory drilling and sampling;
- Examining and testing extraction and treatment methods;
- Compiling pre-feasibility and feasibility studies; and
- Costs incurred in acquiring mineral rights, the entry premiums paid to gain access to areas of interest and amounts payable to third parties to acquire interests in existing projects.

Exploration and evaluation assets are subsequently valued at cost less impairment. In circumstances where a project is abandoned, the cumulative capitalised costs related to the project are written off in the period when such decision is made.

Exploration and evaluation assets are not depreciated. These assets are transferred to mine development costs within property, plant and equipment when a decision is taken to proceed with the development of the project.

2.8. Property, plant and equipment

Mine development costs

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 includes costs directly attributable to the construction of a mine and the related infrastructure. Once a development decision has been taken, the carrying amount of the exploration and evaluation expenditure in respect of the area of interest is aggregated with the development expenditure and classified under non-current assets as 'mine development costs'. Mine development costs are reclassified as 'mining assets' at the end of the commissioning phase, when the mine is capable of operating in the manner intended by management.

Mine development costs are not depreciated, except for property plant and equipment used in the development of a mine. Such

property, plant and equipment are depreciated on a straight-line basis based on estimated useful lives and depreciation is capitalised as part of mine development costs.

Mining assets

Mining assets are stated at cost less accumulated depreciation. Mining assets include the cost of acquiring and developing mining assets and mineral rights, buildings, vehicles, plant and machinery and other equipment located on mine sites and used in the mining operations.

Mining assets, where economic benefits from the asset are consumed in a pattern which is linked to the production level, are depreciated using a units of production method based on the volume of ore reserves. This results in a depreciation charge proportional to the depletion of reserves. The basis for determining ore reserve estimates is set out in note 3.2. Where the mining plan anticipates future capital expenditure to support the mining activity over the life of the mine, the depreciable amount is adjusted for the related assets under construction and estimated future expenditure.

Certain property, plant and equipment within mining assets are depreciated based on estimated useful lives, if shorter than the remaining life of the mine or if such property, plant and equipment can be moved to another site subsequent to the mine closure.

Stripping activity assets

Stripping costs incurred during the development of the mine are capitalised as part of mine development costs and are subsequently depreciated over the life of a mine on a units of production basis.

Stripping costs incurred during the production phase of a mine if they relate to gaining improved access to an identified component of an ore body to be mined in future periods are deferred and capitalised as part of the mining assets and are written off to profit or loss in the period over which economic benefits related to the stripping activity are realised where this is the most appropriate basis for matching the costs against the related economic benefits.

Where, during the production phase, further development of the mine requires a phase of unusually high overburden removal activity that is similar in nature to pre-production mine development, such stripping costs are considered in a manner consistent with stripping costs incurred during the development of the mine before the commercial production commences.

Non-mining assets

Non-mining assets are stated at cost less accumulated depreciation. Non-mining assets are depreciated on a straight-line basis based on estimated useful lives.

Capital construction in progress

Capital construction in progress is stated at cost. On completion, the cost of construction is transferred to the appropriate category of property, plant and equipment. Capital construction in progress is not depreciated.

Depreciation

Property, plant and equipment are depreciated using a units of production method as set out above or on a straight-line basis based on estimated useful lives. Estimated useful lives normally vary as set out below.

	Average life Number of years
Buildings	15-50
Plant and machinery	3-20
Vehicles	5-7
Office equipment	5-10
Computer equipment	3-5

Residual values and useful lives are reviewed and adjusted if appropriate, at each reporting date. Changes to the estimated residual values or useful lives are accounted for prospectively.

2.9. Impairment of non-financial assets

Property, plant and equipment, exploration and evaluation assets and other non-financial assets are tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. This applies to the assets held by the Group itself as well as the Group's share of the assets held by the associate.

When a review for impairment is conducted, the recoverable amount is assessed by reference to the higher of 'value in use' (being the net present value of expected future cash flows of the relevant cash generating unit) or 'fair value less costs to sell'. Where there is no binding sale agreement or active market, fair value less costs to sell is based on the best information available to reflect the amount the Group could receive for the cash generating unit in an arm's length transaction. Future cash flows are based on:

- estimates of the quantities of the reserves and mineral resources for which there is a high degree of confidence of economic extraction;
- future production levels;
- future commodity prices (assuming the current market prices will revert to the Group's assessment of the long-term average price, generally over a period of up to five years); and

future cash costs of production, capital expenditure, environment protection, rehabilitation and closure.

IAS 36 'Impairment of assets' includes a number of restrictions on the future cash flows that can be recognised in respect of future restructurings and improvement related capital expenditure. When calculating 'value in use', it also requires that calculations should be based on exchange rates current at the time of the assessment.

For operations with a functional currency other than the US Dollar, the impairment review is undertaken in the relevant functional currency. These estimates are based on detailed mine plans and operating budgets, modified as appropriate to meet the requirements of IAS 36 'Impairment of assets'.

The discount rate applied is based upon a post-tax discount rate that reflects current market assessments of the time value of money and the risks associated with the relevant cash flows, to the extent that such risks are not reflected in the forecast cash flows.

If the carrying amount of the asset exceeds its recoverable amount, the asset is impaired and an impairment loss is charged to profit or loss so as to reduce the carrying amount in the statement of financial position to its recoverable amount. A previously recognised impairment loss is reversed if the recoverable amount increases as a result of a reversal of the conditions that originally resulted in the impairment. This reversal is recognised in profit or loss and is limited to the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised in prior years.

2.10. Provisions for close down and restoration costs

Close down and restoration costs include the dismantling and demolition of infrastructure and the removal of residual materials and remediation of disturbed areas. Close down and restoration costs are provided for in the accounting period when the legal or constructive obligation arising from the related disturbance occurs, whether this occurs during the mine development or during the production phase, based on the net present value of estimated future costs. Provisions for close down and restoration costs do not include any additional obligations which are expected to arise from future disturbance. The costs are estimated on the basis of a closure plan. The cost estimates are calculated annually during the life of the operation to reflect known developments and are subject to formal review at regular intervals.

The amortisation or unwinding of the discount applied in establishing the net present value of provisions is charged to profit or loss in each accounting period. The amortisation of the discount is shown as a financing cost, rather than as an operating cost. Other movements in the provisions for close down and restoration costs, including those resulting from new disturbance, updated cost estimates, changes to the lives of operations and revisions to discount rates are capitalised within property, plant and equipment. These costs are then depreciated over the lives of the assets to which they relate.

Where rehabilitation is conducted systematically over the life of the operation, rather than at the time of closure, provision is made for the outstanding continuous rehabilitation work at each reporting date. All other costs of continuous rehabilitation are charged to profit or loss as incurred.

Changes in the measurement of a liability relating to the decommissioning of plant or other site preparation work (that result from changes in the estimated timing or amount of the cash flow or a change in the discount rate), are added to or deducted from the cost of the related asset in the current period. If a decrease in the liability exceeds the carrying amount of the asset, the excess is recognised immediately in profit or loss. If the asset value is increased and there is an indication that the revised carrying value is not recoverable, an impairment test is performed in accordance with the accounting policy set out above.

2.11. Financial instruments

Financial assets and financial liabilities are recognised in the consolidated statement of financial position when the Group entity becomes party to the contractual provisions of the instrument.

Financial assets and liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs attributable to financial assets and financial liabilities carried at fair value through profit or loss (FVPL) are expensed in profit or loss.

The subsequent measurement of financial assets and liabilities is set out below.

Effective interest method

The effective interest rate method is a method of calculating the amortised cost of a financial asset or financial liability and of allocating interest over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts and payments through the expected life of the financial asset or financial liability, or where appropriate, a shorter period, to the gross carrying amount of the financial asset or amortised cost of the financial liability.

Probability of default

For the purpose of IFRS, management considers the following definition of "default", subject to underlying agreements:

- a missed or delayed disbursement of interest and/or principal;
- bankruptcy, administration, legal receivership, or other legal blocks to the timely payment of interest and/or principal; or
- a distressed exchange occurs where a new security is issued which amounts to a diminished financial obligation or had the apparent purpose of helping the borrower avoid default.

Financial assets

Classification and subsequent measurement

The Group classified its financial assets in the following measurement categories:

- those to be measured subsequently at fair value (either through profit or loss or through OCI); and
- those to be measured at amortised cost.

The classification depends on the entity's business model for managing the financial assets and the contractual cash flow characteristics of the financial asset.

Financial assets that meet the following conditions are subsequently measured at amortised cost:

- the financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows: and
- the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

All other financial assets are subsequently measured at fair value either through OCI or profit or loss.

The Group may, at initial recognition, irrevocably designate a financial asset as measured at FVPL if doing so eliminates or significantly reduces a measurement or recognition inconsistency (sometimes referred to as an 'accounting mismatch') that would otherwise arise from measuring assets or liabilities or recognising the gains and losses on them on different bases.

Impairment

The Group assesses on a forward looking basis the expected credit losses (ECL) associated with its financial assets carried at amortised cost. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

For trade receivables and contract assets, the group applies the IFRS 9 simplified approach to measuring ECL which uses a lifetime expected loss allowance for all trade receivables and contract assets. Trade receivables and contract assets are written off when there is no reasonable expectation of recovery.

Credit-impaired financial assets

A financial asset is credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Evidence that a financial asset is credit-impaired include observable data about the following events:

- significant financial difficulty of the issuer or the borrower;
- a breach of contract, such as a default or past due event;
- the lender(s) of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower a concession(s) that the lender(s) would not otherwise consider;
- it is becoming probable that the borrower will enter bankruptcy or other financial reorganisation:
- the disappearance of an active market for that financial asset because of financial difficulties; or
- the purchase or origination of a financial asset at a deep discount that reflects the incurred credit losses.

For credit-impaired financial assets, the credit-adjusted effective interest rate is applied to the amortised cost of the financial asset from initial recognition. When calculating the credit-adjusted effective interest rate, The Group estimates the expected cash flows by considering all contractual terms of the financial asset and ECL.

Cash and cash equivalents

Cash and cash equivalents include cash on hand, demand deposits and short-term, highly liquid investments readily convertible to known amounts of cash and subject to insignificant risk of changes in value and are measured at cost which is deemed to be fair value as they have a short-term maturity.

Trade receivables

Trade receivables are recognised initially at their transaction price and are subsequently measured at amortised cost using the effective interest rate method, less loss allowance.

Financial liabilities and equity

Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of the Group after deducting all of its liabilities. Equity instruments issued are recorded at the proceeds received, net of direct issue cost.

Borrowings

Borrowings are recognised initially at fair value, net of transaction costs incurred. Borrowings are subsequently measured at amortised cost, using the effective interest method. Any difference between the proceeds (net of transaction costs) and the redemption amount is recognised in profit or loss over the period of the borrowings using the effective interest method.

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

Trade and other payables

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

Financial quarantee contracts

Gazprombank Guarantee: The guarantee asset and liability under the financial guarantee contract are recognised as one unit of account at nil fair value on inception. Subsequently, the guarantee asset is measured at amortised cost based on the guarantee fee accrued to the reporting date that is expected to be received from IRC less provision for expected credit losses and the guarantee liability is measured at the amount of the loss allowance for expected credit losses. The guarantee liability is measured at the higher of the amount of the loss allowance in accordance with IFRS 9 and the amount initially recognised less the cumulative amount of income recognised in accordance with the principles of IFRS 15. As the amount initially recognised was nil, the guarantee liability is measured at the amount of the loss allowance for expected credit losses in accordance with IFRS 9.

ICBC Guarantee: The liability was measured on a consistent basis, however, upon transition to IFRS 9 the guarantee fee income asset was recognised as the present value of all future guarantee income measured at FVTPL.

Derivatives and hedging activities

Derivatives are initially recognised at fair value at the date the derivative contracts are entered into and are subsequently remeasured at fair value. The accounting for subsequent changes in fair value depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged.

The Group designates certain derivative financial instruments as hedging relationships. For the purposes of hedge accounting, hedging relationships may be of three types:

- fair value hedges are hedges of particular risks that may change the fair value of a recognised asset or liability;
- cash flow hedges are hedges of particular risks that may change the amount or timing of future cash flows; and
- hedges of net investment in a foreign entity are hedges of particular risks that may change the carrying value of the net assets of a foreign entity.

Currently the Group has only cash flow hedge relationships.

To qualify for hedge accounting the hedging relationship must meet several strict conditions on documentation, probability of occurrence, hedge effectiveness and reliability of measurement. If these conditions are not met, then the relationship does not qualify for hedge accounting. In this case the hedging instrument and the hedged item are reported independently as if there were no hedging relationship.

The effective portion of changes in fair value of derivatives that are designated and qualify as cash flow hedges is recognised in other comprehensive income. The fair value gain or loss relating to the ineffective portion is recognised immediately in profit or loss.

Amounts previously recognised in other comprehensive income and accumulated in hedging reserve in equity are reclassified to profit or loss in the periods when the hedged item is recognised in profit or loss, in the same line of the statement of profit or loss as the recognised hedged item.

Hedge accounting is discontinued when the hedging instrument expires or is sold, terminated or exercised, or no longer qualifies for hedge accounting. Any gain or loss recognised in other comprehensive income at that time is accumulated in equity and is reclassified to profit or loss when the forecast transaction is ultimately recognised in profit or loss. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in equity is recognised immediately in profit or loss.

Changes in fair value of any derivative instrument that does not qualify for hedge accounting are recognised in profit or loss immediately and included in other finance gains or losses.

Derivatives embedded in other financial instruments or non-financial host contracts are treated as separate derivatives when their risks and characteristics are not closely related to their host-contract and the host contract is not carried at fair value. Embedded derivatives are recognised at fair value at inception. Any change to the fair value of the embedded derivatives is recognised in other finance gains or losses in profit or loss. Embedded derivatives which are settled net are disclosed in line with the maturity of their host contracts.

2.12. Provisions

Provisions are recognised when the Group has a present obligation, whether legal or constructive, as a result of a past event for which it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation.

Provisions are measured at the present value of management's best estimate of the expenditure required to settle the obligation at the reporting date. The discount rate used to determine the present value reflects current market assessments of the time value of money and the risks specific to the liability.

2.13. Inventories

Inventories include the following major categories:

- Stores and spares represent raw materials consumed in the production process as well as spare parts and other maintenance supplies.
- Construction materials represent materials for use in capital construction and mine development.
- Ore in stockpiles represent material that, at the time of extraction, is expected to be processed into a saleable form and sold at

a profit. Ore in stockpiles is valued at the average cost per tonne of mining and stockpiling the ore. Quantities of ore in stockpiles ore are assessed through surveys and assays. Ore in stockpiles is classified between current and non-current inventory based on the expected processing schedule in accordance with the Group's mining plan.

- Work in progress inventory primarily represents gold in processing circuit that has not completed the production process. Work
 in progress inventory is valued at the average production costs.
- Flotation concentrate represents very fine, powder-like product containing the valuable ore mineral from which most of the
 waste mineral has been eliminated. Flotation concentrate is valued at the average production costs.

Inventories are valued at the lower of cost and net realisable value, with cost being determined primarily on a weighted average cost basis.

Provisions are recorded to reduce ore in stockpiles, work in process, flotation concentrate and finished goods inventory to net realisable value where the net realisable value is lower than relevant inventory cost at the reporting date. Net realisable value is determined with reference to relevant market prices less estimated costs to complete production and bring the inventory into its saleable form. Provisions are also recorded to reduce mine operating supplies to net realisable value, which is generally determined with reference to salvage or scrap value, when it is determined that the supplies are obsolete. Provisions are reversed to reflect subsequent recoveries in net realisable value where the inventory is still on hand at the reporting date.

2.14. Leases

As explained in note 2.2, the Group has changed its accounting policy for leases on adoption of IFRS 16.

Accounting policy applicable from 1 January 2019

The Group assesses at contract inception whether a contract is, or contains, a lease. That is, if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

The Group recognises right-of-use assets at the commencement date of the lease (i.e., the date the underlying asset is available for use). The right-of-use assets are recognised at their fair value or, if lower, at the present value of the minimum lease payments, each determined at the commencement date of the lease. The corresponding liability to the lessor is included in the statement of financial position as a lease obligation. The right-of-use asset is included within Property, plant and equipment. Right-of-use assets are depreciated on a straight-line basis over the shorter of the lease term and the estimated useful lives of the assets. The Group applies IAS 36 to determine whether right-of-use assets are impaired and accounts for any identified impairment loss when incurred.

At the commencement date of the lease, the Group recognises lease liabilities measured at the present value of lease payments to be made over the lease term. Lease liabilities include the net present value of the following lease payments:

- fixed payments (including in-substance fixed payments), less any lease incentives receivable
- variable lease payment that are based on an index or a rate
- amounts expected to be payable by the lessee under residual value guarantees
- the exercise price of a purchase option if the lessee is reasonably certain to exercise that option, and
- payments of penalties for terminating the lease, if the lease term reflects the lessee exercising that option.

In calculating the present value of lease payments, the Group uses its incremental borrowing rate at the lease commencement date because the interest rate implicit in the lease is generally not readily determinable. Subsequently, the lease liability is adjusted for interest and lease payments, as well as the impact of lease modifications, amongst others. Lease liabilities are presented as a separate line in the statement of financial position.

The Group continues to account for the payments associated with short-term leases, leases of low-value assets and leases to explore for or use minerals and similar non-regenerative resources as an expense on a straight-line basis in profit or loss.

Accounting policy applicable prior to 1 January 2019

Leases where the lessor retains substantially all the risks and rewards of ownership 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 period of the lease.

2.15. Revenue recognition

To recognise revenue under IFRS 15, the Group applies the following five steps:

- Identify the contract(s) with a customer;
- Identify the separate performance obligations in the contract: Performance obligations are promises in a contract to transfer to a customer goods or services that are distinct;
- Determine the transaction price: The transaction price is the amount of consideration to which the Group expects to be entitled
 in exchange for transferring promised goods or services to a customer. If the consideration promised in a contract includes a
 variable amount, the Group estimates the amount of consideration to which it expects to be entitled in exchange for transferring
 the promised goods or services to a customer;
- Allocate the transaction price to each performance obligation on the basis of the relative stand-alone selling prices of each distinct good or service promised in the contract;
- Recognise revenue when a performance obligation is satisfied by transferring a promised good or service to a customer (which is when the customer obtains control of that good or service). A performance obligation may be satisfied at a point in time or

over time. For a performance obligation satisfied over time, the Group selects an appropriate measure of progress to determine how much revenue should be recognised as the performance obligation is satisfied.

Sales of gold and silver

The majority of the Group's revenue is derived from the sale of refined gold. The sale of gold is classified as a single performance obligation and revenue is recognised at a point in time when control has passed to the customer, as specified in individual sales contracts. The sales price is determined with reference to LBMA fixing at the time of sale.

Silver is a co-product of gold production. Sales of silver is recognised in revenue. Sales of silver is classified as a single performance obligation and revenue is recognised at a point in time when control has passed to the customer, as specified in individual sales contracts.

Other revenue

Other revenue is recognised as follows:

- engineering contracts: revenue under each engineering contract is classified as a single performance obligation and revenue is recognised over time based on percentage completion applied to the contract price;
- flotation concentrate: the sale of flotation concentrate is classified as a single performance obligation and revenue is recognised at a point in time when control has passed to the customer, as specified in individual sales contracts;
- sales of other goods represent the procurement of materials, consumables and equipment for third parties. Revenue from sales
 of other goods is classified as a single performance obligation and revenue is recognised at a point in time when control has
 passed to the customer:
- other services: revenue from other services is classified as a single performance obligation and revenue is recognised over time during the term of the relevant contract; and
- rental income is classified as a single performance obligation and revenue is recognised over time during the term of the relevant lease.

2.16. Borrowing costs

Borrowing costs are generally expensed as incurred except where they relate to the financing of acquisition, construction or development of qualifying assets, which are mining projects under development that necessarily take a substantial period of time to get prepared for their intended use. Such borrowing costs are capitalised and added to mine development costs of the mining project when the decision is made to proceed with the development of the project and until such time when the project is substantially ready for its intended use (which is when commercial production is ready to commence) or if active development is suspended or ceases.

To the extent that funds are borrowed to finance a specific mining project, borrowing costs capitalised represent the actual borrowing costs incurred. To the extent that funds are borrowed for the general purpose, borrowing costs capitalised are determined by applying the interest rate applicable to appropriate borrowings outstanding during the period to the average amount of capital expenditure incurred to develop the relevant mining project during the period.

2.17. Taxation

Tax expense for the period comprises current and deferred tax. Tax is recognised in profit or loss, except to the extent that it relates to items recognised in the statement of comprehensive income or directly in equity. In this case, the tax is also recognised in the statement of comprehensive income or directly in equity, respectively.

Current tax is the tax expected to be payable on the taxable income for the year calculated using rates that have been enacted or substantively enacted by the reporting date. It includes adjustments for tax expected to be payable or recoverable in respect of previous periods.

Full provision is made for deferred taxation on all temporary differences existing at the reporting date with certain limited exceptions. Temporary differences are the difference between the carrying value of an asset or liability and its tax base. The main exceptions to this principle are as follows:

- Tax payable on the future remittance of the past earnings of subsidiaries, associate and jointly controlled entities is provided for
 except where the Company is able to control the remittance of profits and it is probable that there will be no remittance in the
 foreseeable future.
- Deferred tax is not provided on the initial recognition of goodwill or from the initial recognition of an asset or liability in a
 transaction that does not affect accounting profit or taxable profit and is not a business combination.
- Deferred tax assets are recognised only to the extent that it is more likely than not that they will be recovered.

Deferred tax is provided in respect of fair value adjustments on acquisitions. These adjustments may relate to assets such as mining rights that, in general, are not eligible for income tax allowances. In such cases, the provision for deferred tax is based on the difference between the carrying value of the asset and its nil income tax base.

Deferred tax is calculated at the tax rates that are expected to apply in the period when the liability is settled or the asset is realised using tax rates that have been enacted, or substantively enacted. Deferred tax is charged or credited to profit or loss, except when it relates to items charged or credited directly to equity, in which case the deferred tax is also dealt within equity.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set-off current tax assets against current tax liabilities, when they relate to income taxes levied by the same taxation authority and the Group intends to settle its current tax assets

and liabilities on a net basis.

3. Areas of judgement in applying accounting policies and key sources of estimation uncertainty

When preparing the consolidated financial statements in accordance with the accounting policies as set out in note 2, the Directors necessarily makes judgements and estimates that can have a significant impact on the financial statements. These judgements and estimates are based on Directors' best knowledge of the relevant facts and circumstances and previous experience. Actual results may differ from these estimates under different assumptions and conditions.

3.1. Critical accounting judgements

The following are the critical judgements, apart from those involving estimations (which are presented separately below), that the Directors have made in the process of applying the Group's accounting policies and that have the most significant effect on the amounts recognised in these financial statements.

Significant influence over IRC and IRC classification

As at 31 December 2019, the Group was the single largest shareholder of IRC, holding approximately 31.1% of IRC's issued shares. The Group considers that it exercises significant influence over, but does not control, IRC such that its equity is accounted for as an investment in an associate, in accordance with IAS 28 "Investments in associates". Significant influence is defined as the power to participate in the financial and operating policy decisions of the investee. If control were to exist then IRC would be required to be consolidated as a subsidiary into the Group's consolidated financial information.

In making this assessment, the Group also considered the definition of control under IFRS 10 "Consolidated Financial Statements" being where an investor controls an investee when it 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.

The factors considered included:

- relative shareholdings;
- shareholder voting rights;
- rights to nominate and appoint Directors and executive management of IRC;
- influence over the IRC Board and executive management; and
- operational independence of IRC.

After taking into account the aforementioned control factors in aggregate, it is considered that the Group does not exercise de facto control over IRC and IRC is not a subsidiary to the Group.

On 18 March 2020, the Group announced a preliminary agreement to dispose of its 29.9% out of 31.1.% interest in IRC to Stocken Board AG for a cash consideration of US\$10 million, subject to certain conditions precedent being met, including the release of the Group's obligation to guarantee IRC's external debt under the Gazprombank Facility (note 26). This was a non-adjusting event and the investment was not considered to be an asset held-for-sale under IFRS 5 "Non-current Assets Held for Sale and Discontinued Operations" as at 31 December 2019.

Accordingly, accounting treatment applied to treat the Group's investment in IRC is as an investment in associate in accordance with IAS 28 "Investments in associates".

At the 31 December 2019, the Group's reviewed the carrying value of its 31.1% investment in IRC and concluded that, based on value-in-use calculations, a US\$23.4 million impairment is required against the US\$72.0 million carrying value of investment in IRC (note 14). The non-adjusting post year end effects of Covid-19 and the significant decline in the oil price have contributed a significant depreciation of the Russian Rouble against the US Dollar exchange rate. The above, combined with an increase in iron ore price, would have a positive effect on the value in use of the IRC investment.

Valuation of financial guarantee contract

The Group has provided a guarantee over IRC's external borrowings from Gazprombank, which was issued in March 2019. Details of the guarantee arrangements are set out in note 26.

The Group made an accounting policy choice to recognise the guarantee asset and liability under the financial guarantee contract as one unit of account at nil fair value on inception. Subsequently, the guarantee asset is recognised on accruals basis and the guarantee liability is measured at the amount of the loss allowance for expected credit losses (ECL), as this was higher than the amount initially recognised less the cumulative amount of income recognised in accordance with the principles of IFRS 15.

In determining the amount of the loss allowance, the Group makes significant judgement with regards to whether the credit risk on the financial guarantee contract has increased significantly since initial recognition and whether the amount of the loss allowance is measured as a 12-month ECL or lifetime ECL in accordance with the IFRS 9 Impairment Model.

In making the assessment whether the credit risk on the financial guarantee contract has increased significantly since initial recognition, the Group considered the following factors:

- changes in the cumulative probability of default;

- changes in the calculated shadow credit rating of IRC using a Moody's scorecard methodology;
- operational and financial performance of IRC during the period and future outlook;
- compliance with debt service obligations and covenants under the Gazprombank Facility;
- changes in the regulatory, economic, or technological environment of IRC; and
- the impact of the IRC investment impairment of \$23.4 million (note 14).

After taking into account the aforementioned factors in aggregate, the Directors concluded that the credit risk on the financial guarantee contract has not increased significantly since initial recognition. Accordingly, the financial guarantee contract liability as at 31 December 2019 was recognised in the amount of 12-month ECL of US\$8.9 million.

The following methodologies and key input and assumptions were used to estimate the amount of the 12-month ECL:

- estimation of the total liability value using a number of valuation techniques incorporating an estimation of current market borrowing rates, as well as techniques considering the capital structure of IRC and future projections of the likelihood of default;
- information used in the valuation included factors relating to IRC performance mentioned in addition to equity market prices for IRC and Petropavlovsk and yields on comparable credit bonds in the mining industry; and
- the total liability value is used to derive a market implied annualised default rate over the life of the guarantee which is then
 applied to the balance over the next 12 months to estimate the probability of default over this period and subsequent loss
 adjusted for assumed recovery.

Functional currency

IAS 21 "The Effects of Changes in Foreign Exchange Rates" defines functional currency as the currency of the primary economic environment in which the entity operates. The Group therefore performs an analysis of the currencies in which each subsidiary primarily generates and expends cash. This involves an assessment of the currency in which sales are generated and operational and capital expenditures are incurred, and currency in which external borrowing costs are denominated. Management makes judgements in defining the functional currency of the Group's subsidiaries based on economic substance of the transactions relevant to these entities.

For each of the Group's consolidated entities, management performed analysis of relevant factors that are indicators of functional currency and, based on the analysis performed, determined functional currency, accordingly. The Group concluded that the functional currency for each of the subsidiaries in Russia, except for its research institute Irgiredmet, is the US Dollar. Functional currency for Irgiredment was concluded to be the Russian Rouble.

Cash generating unit ("CGU") determination and impairment indicators

The Group exercises judgement in determining the Groups individual CGUs based upon an assessment of the whether the cash inflows generated are capable of being separately identifiable and independent. This assessment considered whether there is an active market for the outputs of each significant element of the production process, including gold concentrate, and the Group's CGUs were concluded to be Pioneer, Malomyr and Albyn (note 4) with POX Hub facilities allocated between Pioneer and Malomyr CGUs based on expected processing of flotation concentrate. Management also applies judgement in allocating assets that do not generate independent cash inflows to the Group's CGUs. Any changes to CGU determinations would impact the carrying values of the respective CGUs.

The Group considers both external and internal sources of information in assessing whether there are any indications that its CGUs are impaired. External sources of information include changes in the market, economic and legal environment in which the Group operates that are not within its control. Internal sources of information include the manner in which mining assets and plant and equipment are being used or are expected to be used and indicators of economic performance of such assets. Judgement is therefore required to determine whether these updates represent significant changes in the recoverable amount of an asset or CGU, and are therefore indicators of impairment or impairment reversal.

Advances from customers under gold sales contracts

The Group has entered into prepaid gold sales arrangements, which are settled solely through physical delivery and are priced based on the spot gold price, prevailing at the date of the respective shipment. The arrangements are considered to fall under IFRS 15 'Revenue from Contracts with Customers' and the advances received represent contract liabilities included within Trade and other payables as Advances from customers rather than falling to be accounted under IFRS 9 'Financial Instruments' on which case it would presented within borrowings. As of 31 December 2019, the relevant contract liabilities amount to US\$187.4 million (31 December 2018: US\$163.8 million).

3.2. Key sources of estimation uncertainty

The key assumptions concerning the future, and other key sources of estimation uncertainty at the reporting period that may have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are discussed below.

Ore reserve estimates

The Group estimates its ore reserves and mineral resources based on the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code) and the internally used Russian Classification System, adjusted to conform with the mining activity to be undertaken under the Group mining plan. Both the JORC Code and the Russian Classification System

require the use of reasonable investment assumptions when reporting reserves, including future production estimates, expected future commodity prices and production cash costs.

Ore reserve estimates are used in the calculation of depreciation of mining assets using a units of production method (note 13), impairment charges (note 6) and for forecasting the timing of the payment of close down and restoration costs (note 22). Also, for the purposes of impairment reviews and the assessment of life of mine for forecasting the timing of the payment of close down and restoration costs, the Group may take into account mineral resources in addition to ore reserves where there is a high degree of confidence that such resources will be extracted.

Ore reserve estimates may change from period to period as additional geological data becomes available during the course of operations or economic assumptions used to estimate reserves change. Such changes in estimated reserves may affect the Group's financial results and financial position in a number of ways, including the following:

- Asset carrying values due to changes in estimated future cash flows (note 6).
- Depreciation charged to profit or loss where such charges are determined by using a units of production method or where the
 useful economic lives of assets are determined with reference to the life of the mine.
- Provisions for close down and restoration costs where changes in estimated reserves affect expectations about the timing of the payment of such costs (note 22).
- Carrying value of deferred tax assets and liabilities (note 21) where changes in estimated reserves affect the carrying value of the relevant assets and liabilities.

Impairment and impairment reversals

The Group reviews the carrying values of property, plant and equipment to determine whether there is any indication that those assets are impaired. The recoverable amount of an asset, or cash-generating unit ('CGU'), is measured as the higher of fair value less costs to sell and value in use.

The Group necessarily applies judgement in the determining the assumptions to be applied within the value in use calculations. The key assumptions which formed the basis of forecasting future cash flows and the value in use calculation are set out in note 6.

Future changes to the key assumptions in the value in use calculation could impact the carrying value of the respective assets. The impairment assessments are sensitive to changes in commodity prices, foreign exchange rates and discount rates. Changes to these assumptions would result in changes to conclusions in relation to impairment, which could have a significant effect on the consolidated financial statements. Details of impairment and/or impairment reversals, together with a sensitivity analysis, in relation to the property, plant and equipment are set out in note 6.

Valuation of convertible bonds

The conversion option is a derivative financial liability measured at fair value whose valuation incorporates among other inputs the Group's credit risk, implied credit spreads and historic share price volatility. The non-adjusting post year end effects of Covid-19 have resulted in a significant increase in the gold price that together with depreciation of the Russian Rouble, in which most of the Group's operating expenses are denominated, have contributed to significant increase in the share price of the Company increasing the value of the convertible bond option liability.

Taxation

The Group is subject to income tax in the UK, Russian Federation and Cyprus.

Deferred tax liabilities are calculated on taxable temporary differences, being the difference between the tax and accounting base.

Deferred tax assets, including those arising from unused tax losses carried forward for the future tax periods and deductible temporary differences, are recognised only when it is either probable that the future taxable profits will be available against which the unused tax losses can be utilised or there are sufficient taxable temporary differences.

Assumptions about the generation of future taxable profits depend on management's estimates of future cash flows. Judgements are also required about the application of income tax legislation. In addition, the functional currency for the subsidiaries in Russia is the US Dollar which gives rise to foreign exchange movements in relation to temporary differences and deferred tax (note 10).

The aforementioned estimate and assumptions are subject to risk and uncertainty and there is a possibility that changes in circumstances will alter expectations, which may impact the amount of deferred tax recognised in the statement of financial position and the amount of other tax losses and temporary differences not yet recognised. In such circumstances, the carrying amount of recognised deferred tax assets may require adjustment, resulting in a corresponding charge or credit to profit or loss. In particular, if the Russian Rouble was 10% weaker as at 31 December 2019, this would give rise to an additional US\$17.9 million deferred tax liability and corresponding increase to the tax charge for the year ended 31 December 2019.

Details of deferred tax disclosures are set out in note 21.

3.3. Other sources of estimation uncertainty

Exploration and evaluation costs

The Group's accounting policy for exploration and evaluation expenditure results in exploration and evaluation expenditure being capitalised for those projects where such expenditure is considered likely to be recoverable through future extraction activity or sale or where the exploration activities have not reached a stage which permits a reasonable assessment of the existence of reserves. This policy requires management to make certain estimates and assumptions as to future events and circumstances, in particular whether the Group will proceed with development based on existence of reserves or whether an economically viable extraction operation can be established. Such estimates and assumptions may change from period to period as new information becomes available. If, subsequent to the exploration and evaluation expenditure being capitalised, a judgement is made that recovery of the expenditure is unlikely or the project is to be abandoned, the relevant capitalised amount will be written off to profit or loss. Details of exploration and evaluation assets are set out in note 12.

Deferred stripping costs

Stripping costs are deferred and capitalised if they relate to gaining improved access to an identified component of an ore body to be mined in future periods. The capitalised amount is determined based on the volume of waste extracted, compared with expected ore volume in the identified component of the ore body. The identification of the components of a mine's ore body is a critical estimate and is made by reference to the respective life of mine plan. Changes to the life of mine plan, including the life and design of a mine, may result in the capitalisation of production stripping costs or adjustments of the carrying value of stripping costs capitalised in previous periods. As a result, there could be significant adjustments to the amounts of deferred stripping costs capitalised. Details of deferred stripping costs capitalised are set out in note 13.

Close down and restoration costs

Costs associated with restoration and rehabilitation of mining sites are typical for extractive industries and are normally incurred at the end of the life of the mine. Provision is recognised for each mining site for such costs discounted to their net present value, as soon as the obligation to incur such costs arises. The costs are estimated on the basis of the scope of site restoration and rehabilitation activity in accordance with the mine closure plan and represent management's best estimate of the expenditure that will be incurred. Estimates are reviewed annually as new information becomes available.

The actual costs may be different from those estimated due to changes in relevant laws and regulations, changes in prices as well as changes to the restoration techniques. The actual timing of cash outflows may be also different from those estimated due to changes in the life of the mine as a result of changes in ore reserves or processing levels. As a result, there could be significant adjustments to the provision for close down and restoration costs established which would affect future financial results.

Details of provision for close down and restoration costs are set out in note 22.

Option to acquire non-controlling 25% interest in the Group's subsidiary LLC TEMI

In May 2019, the Group entered into the option contract to acquire the remaining non-controlling 25% interest in the subsidiary LLC TEMI ('TEMI option') from Agestinia Trading Limited, a holder of 25% non-controlling interest in LLC TEMI, for an aggregate consideration of US\$60 million (adjusted to US\$53.5 million if certain conditions are met). LLC TEMI holds the licences for the Elginskoye Ore Field and Afanasievskaya Prospective Ore Area, which have substantial non-refractory gold reserves and resources, suitable for processing at the Albyn Plant. The estimate of the fair value of the option requires determination of the most appropriate inputs to the valuation model including expected volatility and making assumptions about them. The option fair value needs to be remeasured at the end of each reporting period up to the date of settlement. This requires a reassessment of the estimates used at the end of each reporting period. The Group employed an independent third party expert to undertake the valuations of the underlying 25% interest in LLC TEMI and the TEMI option. The key inputs to determine the fair value of the call option are set out in notes 18 and 26. The non-adjusting post year end effects of Covid-19 have resulted in a significant increase in the gold price that together with depreciation of the Russian rouble, in which most of the Company's costs are denominated, both have a positive effect on the valuation of the TEMI option.

4. Segment information

The Group's reportable segments under IFRS 8, which are aligned with its operating locations, were determined to be Pioneer, Malomir and Albyn hard rock gold mines which are engaged in gold and silver production as well as field exploration and mine development. With the closure of Pokrovskiy mine in 2018, as the site was transformed into a key component of the POX Hub, Pokrovskiy ceased being a reportable segment. POX Hub facilities are allocated between Pioneer and Malomir reportable segments based on the expected use by each segment.

Corporate and Other segment amalgamates corporate administration, in-house geological exploration and construction and engineering expertise, engineering and scientific operations and other supporting in-house functions as well as various gold projects and other activities that do not meet the reportable segment criteria.

Reportable segments are based on the internal reports provided to the Chief Operating Decision Maker ('CODM') to evaluate segment performance, decide how to allocate resources and make other operating decisions and reflect the way the Group's businesses are managed and reported.

The financial performance of the segments is principally evaluated with reference to operating profit less foreign exchange impacts.

2019	Pioneer	Malomir	Albyn	Corporate and other	Consolidated
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
Revenue					
Gold (a)	223,193	239,365	229.139	=	691.697
Silver	464	267	146	_	877
Other external revenue	_	_	_	49.015	49.015
Inter segment revenue	45.970	537	4.493	145,326	196,326
Intra group eliminations	(45,970)	(537)	(4,493)	(145,326)	(196,326)
Total Group revenue from external customers	223,657	239,632	229,285	49,015	741,589
Operating expenses and income					
Operating expenses and meeting	(170,349)	(135,427)	(80,017)	(48,745)	(434,538)
Depreciation	(41,225)	(46,549)	(48,144)	(1,857)	(137,775)
Central administration expenses	(41,220)	(40,043)	(+0,1++)	(52,527)	(52,527)
Reversal of impairment of mining assets and in-house service	42,755	_	_	9,404	52,159
(Impairment)/reversal of impairment of ore stockpiles	(664)	(517)	3,959	-	2,778
Reversal of impairment/(impairment) of gold in circuit	101	(243)	-	_	(142)
Total operating expenses (b)	(169,382)	(182,736)	(124,202)	(93,725)	(570,045)
Share of results of associate				(05.070)	(05.070)
				(35,376)	(35,376)
Segment result	54,275	56,896	105,083	(80,086)	136,168
Foreign exchange losses					(20,808)
Operating profit					115,360
Net impairment reversals on financial instruments					30,797
Investment and other finance income					8,826
Interest expense					(59,854)
Net other finance losses					(42,190)
Taxation					(27,246)
Profit for the year					25,693
Segment assets	629,169	705,230	315,152	199,578	1,849,129
Segment liabilities	(185,883)	(157,335)	(23,065)	(128,204)	(494,487)
Deferred tax – net	, , ,	, , ,	, , ,	, , ,	(112,566)
Unallocated cash					2,914
Borrowings					(609,463)
Net assets					635,527
Other segment information					
Additions to non-current assets:					
Exploration and evaluation expenditure	691	-	8,350	1,095	10,136
Capital Expenditure	34,945	24,840	22,009	18,362	100,156
Capitalised Stripping	14,454	12,653		-	27,107
Other items capitalised (c)	19,058	6,087	1,435	-	26,580
Average number of employees	2,910	1,284	1,442	3,345	8,981

⁽a) Net of US\$(31.5) million net of cash settlement paid by the Group for realised cash flow hedges.

⁽b) Operating expenses excluding foreign exchange losses (note 6).

⁽c) Interest and close down and restoration costs capitalised (note 13).

New	2018	Pioneer	Pokrovskiy	Malomir	Albyn	Corporate and other	Consolidated
Solid March Mar		US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
Silver							
Floating concentrate				98,343		-	/ -
Oher external revenue 5.24 - - - 29,058 29,058 Inter segment revenue 524 - 807 55 170,916 172,252 Total Group revenue from external customers Total Group revenue from external customers 171,614 8,022 101,606 189,295 29,058 499,775 Operating expenses and income Operating cash costs ⁶¹ (107,549) (8,667) (53,279) (84,471) 31,286 (285,252) Operating cash costs ⁶¹ (107,549) (8,667) (53,279) (84,471) 31,286 (285,252) Operating cash costs ⁶¹ (107,549) (8,667) (53,279) (84,471) 31,286 (285,252) Operating cash costs ⁶¹ (37,899) (681) 33,335 (69,643) (445) (140,003) Certral administration expenses - - 82,958 - 18,737 10,695 Impairment of exploration and evaluation assets - - (29,192) (17,712) - - 12,929 (17,193) (17,193) (17	Silver	591	29		160	-	
Inter segment revenue 524 - 807 5 170.916 172.252 Intra group eliminations (524) - 8070 (5) (170.916) 172.252 Intra group eliminations 2 2 800 189.295 29,058 499.775 Operating cash costs (**) (170.549) 8,020 101.606 189.295 29,058 499.775 Operating expenses and income **** **** 1,000 (8,4471) (31.286) (28.525) Operating expenses and income *** *** *** (8,4471) (31.286) (28.525) Operating expenses (**) (37.899) (681) (33.355) (69.643) (446) (14.05) (19.55) (19.56) (39.195) (3	Flotation concentrate	-	-	3,202	-	-	
Intra group eliminations (524) - (807) (5) (170,916) (172,252) Total Group revenue from external customers 171,614 8,202 101,606 189,295 29,058 499,775	Other external revenue	-	-	-	-		
			-			170,916	
		(524)	-	(807)	(5)	(170,916)	(172,252)
Operating expenses and income	Total Group revenue from external						
Operating cash costs (®) (107,549) (8,667) (53,279) (84,471) (31,286) (285,252) Depreciation (37,899) (681) (33,335) (69,643) (44,45) (142,003) Central administration expenses (39,195) (31,192)	customers	171,614	8,202	101,606	189,295	29,058	499,775
Operating cash costs (®) (107,549) (8,667) (53,279) (84,471) (31,286) (285,252) Depreciation (37,899) (681) (33,335) (69,643) (44,45) (142,003) Central administration expenses (39,195) (31,192)	Operating expenses and income						
Deprecialion		(107 549)	(8 667)	(53 279)	(84 471)	(31 286)	(285 252)
Central administration expenses - - - - - (39,195) (39,19					. , ,	` ' '	, , ,
Reversal of impairment of mining assets Impairment of mining assets Impairment of exploration and evaluation assets		(07,000)	(001)	(00,000)	(00,010)		
Impairment of exploration and evaluation assets		_	_	82 958	_	` ' '	. , ,
Segment losses on financial investment of sexupants -				02,550		10,707	101,000
Impairment of ore stockpiles		_	_	(12 192)	_	_	(12 192)
Impairment of gold in circuit		_	_		(17 712)	_	
Total operating expenses		(1 415)	(17)			_	
Segment result 24,751				1/		(52,189)	
Segment result 24,751							
Proreign exchange gains 8,450		- 24.754	- (4.462)	- 04.042	47.040		
Department profit 126,612 Net impairment losses on financial instruments (28,634) Investment and other finance income (29,520) (2	Segment result	24,751	(1,103)	84,913	17,312	(100,1)	110,102
Net impairment losses on financial instruments (28,634) investment and other finance income (29,520) [10,105] [Foreign exchange gains						8,450
instruments (28,634) Investment and other finance income 3,775 Interest expense (29,520) Net other finance gains 10,185 Taxation 56,489 Profit for the year 25,929 Segment assets 437,203 630,918 319,139 188,516 1,575,776 Segment liabilities (66,689) 75,876) (100,569) (83,202) (326,336) Deferred tax – net (66,689) 75,876 (100,569) (83,202) (326,336) Unallocated cash (84,73) 84,73	Operating profit						126,612
Investment and other finance income 1,3,775 Interest expense 29,520 Net other finance gains 10,185 Taxation 10,185 Taxation 10,185 Total tor the year 1,575,776 Segment assets 437,203 - 630,918 319,139 188,516 1,575,776 Segment liabilities (66,689) - (75,876) (100,569) (83,202) (326,336) Unallocated cash 1,575,776 Unallocated cash 1,03,473 Loans granted to associate 1,03,473 Unallocated cash 1,03,473 Unallocated c	Net impairment losses on financial						
Interest expense	instruments						(28,634)
Net other finance gains 10,185 10,185 12,899 14,539 14,539 12,572 13,809 14,539 14,539 14,539 14,639 13,804 13	Investment and other finance income						3,775
Net other finance gains 10,185 Taxation (56,489) Profit for the year 25,929 Segment assets 437,203 630,918 319,139 188,516 1,575,776 Segment liabilities (66,689) (75,876) (100,569) (83,202) (326,336) Deferred tax – net (113,354) Unallocated cash (66,689) (83,202) (83,202) (83,202) (83,202) Unallocated cash (84,73) (100,569) (83,202) (83,202) (83,203) Unallocated cash (84,73) (100,569) (83,202) (83,202) (83,203) Unallocated cash (84,73) (113,354) Unallocated to associate (84,73) (100,569) (83,202) (83,202) (83,202) (83,203) Unallocated cash (83,202) (83	Interest expense						(29,520)
Profit for the year 25,929	Net other finance gains						10,185
Segment assets 437,203 - 630,918 319,139 188,516 1,575,776 Segment liabilities (66,689) - (75,876) (100,569) (83,202) (326,336) Deferred tax – net (113,354) (113,354) (113,354) Unallocated cash 8,473 8,473 8,473 Loans granted to associate 50,966 50,966 Borrowings 50,966 50,966 Other segment information Additions to non-current assets: Exploration and evaluation expenditure 1,092 - 1,090 971 - 3,153 Capital Expenditure 50,277 - 59,879 14,539 2,558 127,253 Capitalised Stripping 22,887 - 11,529 12,572 - 46,988 Other items capitalised (9) 28,789 - 5,130 (115) - 33,804	Taxation						(56,489)
Segment liabilities (66,689) - (75,876) (100,569) (83,202) (326,336) Deferred tax – net (113,354) (113,354) Unallocated cash 5 8,473 Loans granted to associate 50,966 Borrowings 5 50,966 Borrowings 5 601,348 Other segment information Additions to non-current assets: 5 5 Exploration and evaluation expenditure 1,092 - 1,090 971 - 3,153 Capital Expenditure 50,277 - 59,879 14,539 2,558 127,253 Capitalised Stripping 22,887 - 11,529 12,572 - 46,988 Other items capitalised (9) 28,789 - 5,130 (115) - 33,804	Profit for the year						25,929
Deferred tax - net (113,354) Unallocated cash 8,473 Loans granted to associate 50,966 Borrowings (594,177) Net assets 601,348 Other segment information Additions to non-current assets: 8 Exploration and evaluation expenditure 1,092 - 1,090 971 - 3,153 Capital Expenditure 50,277 - 59,879 14,539 2,558 127,253 Capitalised Stripping 22,887 - 11,529 12,572 - 46,988 Other items capitalised (9) 28,789 - 5,130 (115) - 33,804	Segment assets	437,203	-	630,918	319,139	188,516	1,575,776
Deferred tax - net (113,354) Unallocated cash 8,473 Loans granted to associate 50,966 Borrowings (594,177) Net assets 601,348 Other segment information Additions to non-current assets: 8 Exploration and evaluation expenditure 1,092 - 1,090 971 - 3,153 Capital Expenditure 50,277 - 59,879 14,539 2,558 127,253 Capitalised Stripping 22,887 - 11,529 12,572 - 46,988 Other items capitalised (9) 28,789 - 5,130 (115) - 33,804		,	-		,		
Unallocated cash 8,473 Loans granted to associate 50,966 Borrowings (594,177) Net assets 601,348 Other segment information Additions to non-current assets: Exploration and evaluation expenditure 1,092 - 1,090 971 - 3,153 Capital Expenditure 50,277 - 59,879 14,539 2,558 127,253 Capitalised Stripping 22,887 - 11,529 12,572 - 46,988 Other items capitalised (9) 28,789 - 5,130 (115) - 33,804		(,)		(- / /	(,,	(, - ,	
Loans granted to associate 50,966 Borrowings (594,177) Net assets 601,348 Other segment information Additions to non-current assets: Exploration and evaluation expenditure 1,092 - 1,090 971 - 3,153 Capital Expenditure 50,277 - 59,879 14,539 2,558 127,253 Capitalised Stripping 22,887 - 11,529 12,572 - 46,988 Other items capitalised (g) 28,789 - 5,130 (115) - 33,804	Unallocated cash						
Borrowings (594,177) Net assets 601,348 Other segment information Additions to non-current assets: Figure 1,090 971 - 3,153 Exploration and evaluation expenditure 50,277 - 59,879 14,539 2,558 127,253 Capital Expenditure 50,277 - 59,879 14,539 2,558 127,253 Capitalised Stripping 22,887 - 11,529 12,572 - 46,988 Other items capitalised (g) 28,789 - 5,130 (115) - 33,804							-, -
Net assets 601,348 Other segment information Additions to non-current assets: Exploration and evaluation expenditure 1,092 - 1,090 971 - 3,153 Capital Expenditure 50,277 - 59,879 14,539 2,558 127,253 Capitalised Stripping 22,887 - 11,529 12,572 - 46,988 Other items capitalised (g) 28,789 - 5,130 (115) - 33,804							
Other segment information Additions to non-current assets: 1,092 - 1,090 971 - 3,153 Exploration and evaluation expenditure 50,277 - 59,879 14,539 2,558 127,253 Capital Expenditure 22,887 - 11,529 12,572 - 46,988 Other items capitalised (g) 28,789 - 5,130 (115) - 33,804							
Exploration and evaluation expenditure 1,092 - 1,090 971 - 3,153 Capital Expenditure 50,277 - 59,879 14,539 2,558 127,253 Capitalised Stripping 22,887 - 11,529 12,572 - 46,988 Other items capitalised (g) 28,789 - 5,130 (115) - 33,804							,
Capital Expenditure 50,277 - 59,879 14,539 2,558 127,253 Capitalised Stripping 22,887 - 11,529 12,572 - 46,988 Other items capitalised (g) 28,789 - 5,130 (115) - 33,804	Additions to non-current assets:						
Capitalised Stripping 22,887 - 11,529 12,572 - 46,988 Other items capitalised (g) 28,789 - 5,130 (115) - 33,804		1,092	-	1,090	971	-	3,153
Other items capitalised (9) 28,789 - 5,130 (115) - 33,804	Capital Expenditure	50,277	-		14,539	2,558	127,253
Other items capitalised (9) 28,789 - 5,130 (115) - 33,804	Capitalised Stripping	22,887	-	11,529	12,572	-	
Average number of employees 2,711 - 1,138 1,485 3,347 8,681	Other items capitalised (9)		-	5,130	(115)	-	33,804
	Average number of employees	2,711	-	1,138	1,485	3,347	8,681

Net of US\$(3.4) million net of cash settlement paid by the Group for realised cash flow hedges. Operating cash costs of Malomir include cost of flotation concentrate sold US\$2.6 million. Operating expenses excluding foreign exchange gains (note 6). Interest and close down and restoration costs capitalised (note 13).

⁽e) (f)

Entity wide disclosures

Revenue by geographical location (a)

	2019	2018
	US\$'000	US\$'000
Russia and CIS	678,348	499,716
United Kingdom of Great Britain	44,975	-
Switzerland	17,898	-
Other	368	59
	741,589	499,775

(a) Based on the location to which the product is shipped or in which the services are provided.

Non-current assets by location of asset (b)

	2019	(restated)
	US\$'000	US\$'000
Russia	1,371,358	1,329,660
Other	1,113	50
	1,372,471	1,329,710

2018

(b) Excluding financial instruments and deferred tax assets.

Information about major customers

During the years ended 31 December 2019 and 31 December 2018 the Group generated revenues from the sales of gold to banks. Included in gold sales revenue for the year ended 31 December 2019 are revenues of US\$647 million which arose from sales of gold to two bank groups that individually accounted for more than 10% of the Group's revenue, namely US\$518 million to Gazprombank and US\$129 million to Sberbank group (2018: US\$451 million which arose from sales of gold to two banks that individually accounted for more than 10% of the Group's revenue, namely US\$368 million to Sberbank of Russia and US\$83 million to Gazprombank). The proportion of Group revenue of each bank may vary from year to year depending on commercial terms agreed with each bank. Management considers there is no major customer concentration risk due to high liquidity inherent to gold as a commodity.

5. Group revenue

	2019	2018
	US\$'000	US\$'000
Sales of goods:		
Gold	691,697	466,674
Silver	877	841
Flotation concentrate	-	3,202
Other goods	33,395	14,603
Rendering of services:		
Engineering and construction contracts	12,535	11,653
Other services	2,347	2,136
Rental income	738	666
	741,589	499,775
Timing of revenue recognition:		
At a point in time	725,969	485,320
Over time	15,620	14,455
	741,589	499,775

6. Operating expenses

	2019	2018
	US\$'000	US\$'000
Net operating expenses (a)	572,313	427,255
Reversal of impairment of mining assets and in-house service (a)	(52,159)	(101,695)
Impairment of exploration and evaluation assets (a)	• •	12,192
(Reversal of impairment)/impairment of ore stockpiles (a)	(2,778)	18,021
Impairment of gold in circuit	142	2,125
Central administration expenses (a)	52,527	39,195
Foreign exchange losses/(gains)	20,808	(8,450)
	590,853	388,643

(a) As set out below.

Net operating expenses

	2019	2018
	US\$'000	US\$'000
Depreciation	137,775	142,003
Staff costs	97,615	71,648
Materials	91,004	89,465
Flotation concentrate purchased	74,010	-
Fuel	43,612	40,077
External services	46,392	19,140
Mining tax charge/(credit)	15,917	(131)
Electricity	34,118	26,001
Smelting and transportation costs	858	365
Movement in ore stockpiles, work in progress, bullion in process, limestone and		
flotation concentrate attributable to gold production	(34,156)	(8,632)
Taxes other than income	7,706	6,418
Insurance	8,437	7,168
Rental fee	3,194	2,034
Provision for impairment of trade and other receivables	2,021	1,435
Bank charges	876	414
Repair and maintenance	6,896	5,400
Security services	4,503	3,892
Travel expenses	2,902	2,955
Goods for resale	19,471	11,200
Other operating expenses	9,162	6,403
	572,313	427,255

Central administration expenses

	2019	2018
	US\$'000	US\$'000
Staff costs	33,466	25,366
Professional fees	1,771	5,531
Insurance	797	616
Rental fee	481	1,723
Business travel expenses	2,000	1,541
Office costs	832	589
Other	13,180	3,829
	52,527	39,195

Impairment charges

Impairment of mining assets

The Group undertook a review of impairment indicators and impairment reversal indicators of the tangible assets attributable to its gold mining projects and supporting in-house service companies. Detailed calculations of recoverable amounts, which are value-in-use calculations based on discounted cash flows, were prepared which concluded no impairment was required as at 31 December 2019 and 2018.

Having considered the excess of estimated recoverable amounts over the carrying values of the associated assets on the statement of financial position as at 31 December 2019 and taking into consideration removed uncertainty connected with the timing of the final construction and performance of the POX hub, the Directors concluded on the following:

- A reversal of impairment previously recorded against the carrying value of the assets that are part of the Pioneer CGU would be appropriate. Accordingly, a pre-tax impairment reversal of US\$43.5 million (being a post-tax impairment reversal of US\$34.8 million) has been recorded against the associated assets within property, plant and equipment. The aforementioned impairment reversal takes into consideration the effect of depreciation attributable to relevant mining assets and intra-group transfers of previously impaired assets to Pioneer.
- A further reversal of impairment previously recorded against the carrying value of the assets of the supporting in-house service companies would be appropriate. Accordingly, a pre-tax impairment reversal of US\$9.4 million (being a post-tax impairment reversal of US\$7.8 million) has been recorded against the associated assets within property, plant and equipment. The aforementioned impairment reversal takes into consideration the effect of depreciation attributable to relevant assets and intragroup transfers of previously impaired assets.

As at 31 December 2018, the Group recognised US\$83.0 million (US\$66.4 million post-tax) reversal of impairment previously recorded against the carrying value of the assets of the Malomir CGU and US\$18.7 million (US\$15.2 million post-tax) reversal of impairment previously recorded against the carrying value of the assets of the supporting in-house service companies to extent of the headroom available at Malomir and Albyn CGUs.

The key assumptions which formed the basis of forecasting future cash flows and the value in use calculation are set out below:

	Year ended	Year ended
	31 December 2019	31 December 2018
Long-term real gold price	US\$1,400/oz	US\$1,300/oz
Discount rate (a)	7.0%	8.5%
RUB : US\$ exchange rate	RUB65.8 : US\$1	RUB67.0 : US\$1

(a) Being the post-tax real weighted average cost of capital, equivalent to a nominal pre-tax discount rate of 9.8% (2018: 12.5%).

With all other assumptions being constant, changes to the aforementioned key assumptions could potentially result in impairment of certain mining assets as set out below.

		Potential impairment (a)
Long-term real gold price	US\$1,260/oz	US\$109 million
Discount rate	8.0%	-
RUB: US\$ exchange rate	RUB60 : US\$1	US\$4 million

(a) In relation to Pioneer and Malomyr CGUs.

Impairment of exploration and evaluation assets

The Group performed a review of its exploration and evaluation assets and concluded no impairment was required as at 31 December 2019 (31 December 2018: the Group performed a review of its exploration and evaluation assets and concluded to suspend exploration at the Flanks of Malomir and surrender the relevant licences. An aggregate impairment charge of US\$12.2 million was recorded against associated exploration and evaluation assets during the year ended 31 December 2018).

As at 31 December 2019 and 31 December 2018, all exploration and evaluation assets in the statement of financial position related to the areas adjacent to the existing mines (note 12).

Impairment of ore stockpiles

The Group assessed the recoverability of the carrying value of ore stockpiles and recorded impairment charges/reversals of impairment as set out below:

	Year end	Year ended 31 December 2019			ended 31 Decemb	per 2018
	Pre-tax impairment charge	Taxation	Post-tax impairment charge	Pre-tax impairment charge	Taxation	Post-tax impairment charge
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
Pioneer	664	(133)	531	-	-	-
Malomir	517	(88)	429	309	(62)	247
Albyn	(3,959)	673	(3,286)	17,712	(3,011)	14,701
	(2,778)	452	(2,326)	18,021	(3,073)	14,948

7. Auditor's remuneration

The Group, including its overseas subsidiaries, obtained the following services from the Company's auditor and their associate:

	2019	2018
	US\$'000	US\$'000
Audit fees and related fees Fees payable to the Company's auditor for the annual audit of the parent company and consolidated financial statements	1,021	803
Fees payable to the Company's auditor and their associate for other services to the Group:		
For the audit of the Company's subsidiaries as part of the audit of the consolidated financial statements	351	320
For the audit of subsidiary statutory accounts pursuant to legislation (a)	84	65
	1,456	1,188
Non-audit fees		
Other services pursuant to legislation – interim review	337	273
Fees for reporting accountants services (b)	400	900
	737	1,173

8. Staff costs

2019	2018
US\$'000	US\$'000
103,728	80,090
26,952	20,855
121	115
280	416
131,081	101,476
8,981	8,681
	103,728 26,952 121 280 131,081

⁽a) Including the statutory audit of subsidiaries in the UK and Cyprus.(b) Fees payable in relation to the circular for the ICBC guarantee restructuring process (notes 26).

9. Financial income and expenses and impairment of financial instruments

	2019 US\$'000	2018 US\$'000
Net impairment reversals/(impairment losses) on financial instruments	00¢ 000	
Reversal of impairment/(impairment) of financial assets (a)	2,333	(3,163)
Financial guarantee contract (b)	28,464	(25,471)
Tinancial guarantee contract	30,797	(28,634)
Investment and other finance income	50,151	(==,===)
Interest income	3.216	3,775
Guarantee fee income (c)	5.610	-,
	8,826	3,775
Interest expense		
Bank loans	-	(1,083)
Notes	(41,995)	(41,886)
Convertible bonds	(12,984)	(12,579)
Prepayment on gold sale agreements	(16,019)	(7,213)
Lease liabilities	(593)	-
	(71,591)	(62,761)
Interest capitalised	12,287	33,666
Unwinding of discount on environmental obligation	(550)	(425)
	(59,854)	(29,520)
Net other finance (losses)/gains		
Fair value (loss)/gain on the conversion option (e)	(31,127)	11,700
Loss on repurchase of the Existing Bonds (g)	(11,211)	-
Fair value gain/(loss) on the guarantee receivable (f)	3,607	(3,720)
Fair value loss on the call option over non-controlling interests (d)	(1,978)	-
Fair value (loss)/gain on other derivative financial instruments	(1,345)	1,961
Fair value (loss)/gain on listed equity investments	(302)	244
Gain on lease modification	166	-
	(42,190)	10,185

- (a) Including US\$3.2 million reversal (2018: US\$3.2 million recognition) of ECL in relation to loans granted to IRC (note 26).
- (b) 2019: US\$28.5 million gain, being net of:
 - recognition of US\$8.9 million guarantee contract liability under Gazprombank guarantee arrangements as at 31 December 2019 in the amount of 12-month ECL; and
 - de-recognition of US\$(37.4) million guarantee contract liability previously recognised under ICBC guarantee arrangements in the amount of the lifetime ECL following termination of the ICBC Facility Agreement.

The determination of the Group's US\$8.9 million guarantee liability as at 31 December 2019 relies upon the critical judgement as to whether there has been a significant increase in IRC's credit risk from March 2019 to December 2019 (see the IRC guarantee critical judgement disclosed in note 3.1). Management have determined that there has not been a significant increase in credit risk since March 2019 and therefore the guarantee liability is measured in the amount of 12-month ECL. This is in contrast to the ICBC guarantee which was measured int the amount of the lifetime ECL as there had previously been a significant increase in credit risk for that guarantee since 2010. This difference in measurement has resulted in the US\$28.5 million net accounting gain.

2018: US\$25.5 million loss, being an increase in provision under ICBC guarantee arrangements from the 12-month ECL to the lifetime ECL as set out above

Further details on the financial guarantee contracts are set out in note 26.

- (c) Guarantee fee income under Gazprombank Guarantee arrangements (note 26).
- (d) Result of re-measurement of the TEMI option to fair value (notes 18 and 26).
- (e) Result of re-measurement of the conversion option to fair value (notes 18 and 20).
- (f) Result of re-measurement of receivable from IRC under ICBC Guarantee arrangements to fair value, including US\$0.7 million guarantee fee income (2018: result of re-measurement of receivable from IRC under ICBC guarantee arrangements to fair value, net of US\$4.0 million guarantee fee income) (note 26).
- (g) US\$100 million convertible bonds due 2020 (the 'Existing Bonds'): difference between the US\$108 million paid to fund the Repurchase Price and the carrying value of the Existing Bonds at redemption (note 20).

10. Taxation

	2019	2018
	US\$'000	US\$'000
Current tax		
Russian current tax	29,660	19,861
	29,660	19,861
Deferred tax		
(Reversal)/origination of timing differences (a)	(2,414)	36,628
Total tax charge	27,246	56,489

(a) Including effect of foreign exchange movements in respect of deductible temporary differences of US\$(20.4) million (year ended 31 December 2018: US\$30.6 million) which primarily arises as the tax base for a significant portion of the future taxable deductions in relation to the Group's property, plant and equipment are denominated in Russian Rouble whilst the future depreciation charges associated with these assets will be based on their US Dollar carrying value and reflects the movements in the Russian Rouble to the US Dollar exchange rate.

The charge for the year can be reconciled to the profit before tax per the statement of profit or loss as follows:

	2019	2018
	US\$'000	US\$'000
Profit before tax	52,939	82,418
Less: share of results of associate	35,376	(15,480)
Profit before tax (excluding associate)	88,315	66,938
Tax on profit (excluding associate) at the Russian corporation tax rate of 20% (2018:		
20%)	17,663	13,387
Effect of the reduced corporation tax rate (a)	(4,813)	(354)
Effect of different tax rates of subsidiaries operating in other jurisdictions	1,239	1,161
Tax effect of expenses that are not deductible for tax purposes ^(b)	7,681	1,191
Tax effect of tax losses for which no deferred income tax asset was recognised (c)	11,967	17,055
Utilisation of previously unrecognised tax losses	(124)	(442)
Foreign exchange movements in respect of deductible temporary differences (d)	(20,424)	30,618
Income not subject to tax (e)	•	(2,209)
Other adjustments (f)	14,057	(3,918)
Tax charge	27,246	56,489

- (a) Under the Russian Federal Law 144-FZ dated 23 May 2016 taxpayers who are participants to the Regional Investment Projects ("RIP") have the right to apply the reduced corporation tax rate over the period until 2027, subject to eligibility criteria. In 2019 and 2018, LLC Albynskiy Rudnik has received tax relief as a RIP participant and was entitled to the reduced statutory corporation tax rate of 17%. In 2019 LLC Malomirskiy Rudnik has received tax relief as a RIP participant and was entitled to the reduced statutory corporation tax rate of 17%.
- (b) Primarily relate to fair value loss on on re-measurement of the conversion option of the Convertible Bonds (note 9).
- (c) Primarily relate to interest expense incurred in the UK and loss on repurchase of the Existing Bonds (note 9) (2018: primarily relate to interest expense and central administration expenses incurred in the UK and loss on fair value change on financial guarantee fee).
- (d) Foreign exchange movements primarily arise as the tax base for a significant portion of the future taxable deductions in relation to the Group's property, plant and equipment are denominated in Russian Rouble whilst the future depreciation charges associated with these assets will be based on their US Dollar carrying value and reflects the movements in the Russian Rouble to the US Dollar exchange rate.
- (e) 2018: Primarily relate to the fair value gain on re-measurement of the conversion option of the Convertible Bonds (note 9).
- (f) 2019: Other adjustments primarily relate to Russian withholding tax on intercompany dividends and dividend income treated as not exempt from UK corporation tax under s.931R Corporation Tax Act 2009.

Tax laws, regulations and court practice applicable to the Group are complex and subject to frequent change, varying interpretations and inconsistent and selective enforcement. There are a number of practical uncertainties associated with the application of relevant tax legislation and there is a risk of tax authorities making arbitrary judgements of business activities. If a particular treatment, based on management's judgement of the Group's business activities, was to be challenged by the tax authorities, the Group may be subject to tax claims and exposures. Management has calculated a total exposure (including taxes and respective interest and penalties) estimated to be US\$10.5 million (2018: US\$8.3 million) of contingent liabilities, including US\$4.8 million (2018: US\$nil) in respect of income tax and US\$5.7 million (2018: US\$8.3 million) in respect of other taxes.

11. Earnings per share

	2019 US\$'000	2018 US\$'000
Profit for the year attributable to equity holders of Petropavlovsk PLC	26,883	24,493
Interest expense on convertible bonds ^(a)	-	-
Profit used to determine diluted earnings per share	26,883	24,493
		No of shares
Weighted average number of Ordinary Shares	3,309,193,559	3,305,069,755
Adjustments for dilutive potential Ordinary Shares(a)	-	-
Weighted average number of Ordinary Shares for diluted earnings per share	3,309,193,559	3,305,069,755
	US\$	US\$
Basic profit per share	0.01	0.01
Diluted profit per share	0.01	0.01

⁽a) Convertible bonds which could potentially dilute basic profit per ordinary share in the future are not included in the calculation of diluted profit per share because they were anti-dilutive for the years ended 31 December 2019 and 31 December 2018.

12. Exploration and evaluation assets

	Flanks of Pioneer US\$'000	Flanks of Albyn US\$'000	Other ^(a) US\$'000	Total US\$'000
At 1 January 2019	6,919	35,047	1,149	43,115
Additions	691	8,350	1,095	10,136
Reallocation and other transfers	(66)	-	•	(66)
Transfer to mining assets	-	-	(62)	(62)
At 31 December 2019	7,544	43,397	2,182	53,123

(a) Amounts capitalised in respect of acquisition of subsidiaries and exploration LLC "Vostok Geologiya", LLC "Perspectiva DV".

	Flanks of Pioneer US\$'000	Flanks of Albyn US\$'000	Flanks of Malomir US\$'000	Other US\$'000	Total US\$'000
At 1 January 2018	5,827	34,076	12,192	1,423	53,518
Additions	1,092	971	-	1,090	3,153
Impairment ^(b)	· -	-	(12, 192)	· -	(12,192)
Transfer to mining assets(c)	-	-	· · · /	(1,364)	(1,364)
At 31 December 2018	6,919	35,047	-	1,149	43,115

⁽b) Note 6

⁽c) Amounts capitalised in respect of limestone, an essential reagent the pressure oxidation process, and underground water deposits to be used for the POX Hub operations.

13. Property, plant and equipment

	Mining assets	Non-mining assets (9)	Capital construction in progress ^(d)	Total
	US\$'000	US\$'000	US\$'000	US\$'000
Cost				
At 1 January 2018 (restated) (i)	1,911,549	178,466	388,032	2,478,047
Additions (a) (restated)	98,697	2,730	72,814	174,241
Interest capitalised (b)	-	-	33,666	33,666
Close down and restoration cost capitalised (note 22)	138	-	-	138
Transfer from exploration and evaluation assets (note 12)	1,364	-	-	1,364
Transfers from capital construction in progress (c)	108,479	582	(109,061)	-
Disposals (e)	(53,744)	(4,526)	(3)	(58,273)
Disposals of subsidiaries	(7,400)	-	-	(7,400)
Reallocation and other transfers	(1,325)	(41)	988	(378)
Foreign exchange differences	-	(4,407)	(21)	(4,428)
At 31 December 2018 (f) (restated)	2,057,758	172,804	386,415	2,616,977
Recognition of right-of-use assets at the transition date	-	1,739	•	1,739
according to IFRS 16				
At 1 January 2019 after transition	2,057,758	174,543	386,415	2,618,716
Additions (a)	67,691	24,427	33,406	125,524
Interest capitalised (b)	-	· -	12,287	12,287
Close down and restoration cost capitalised (note 22)	14,293	-	· -	14,293
Transfer from exploration and evaluation assets (note 12)	62	-	-	62
Transfers from capital construction in progress (c)	390,540	815	(391,355)	-
Disposals (e)	(21,148)	(7,718)	(50)	(28,916)
Reallocation and other transfers	80	(271)	` <i>-</i>	(191)
Foreign exchange differences	-	2,719	36	2,755
At 31 December 2019 (f)	2,509,276	194,515	40,739	2,744,530
Accumulated depreciation and impairment				
At 1 January 2018	1,340,968	158,254	1,511	1,500,733
Charge for the year (restated) (i)	140,345	2,016	-	142,361
Disposals	(52,818)	(4,410)	-	(57,228)
Disposals of subsidiaries	(7,400)	-	-	(7,400)
Reallocation and other transfers	(352)	(23)	(3)	(378)
Reversal of impairment (note 6)	(82,958)	(18,737)	-	(101,695)
Foreign exchange differences	-	(3,479)	-	(3,479)
At 31 December 2018 (restated)	1,337,785	133,621	1,508	1,472,914
Charge for the year	135,265	3,386	-	138,651
Disposals	(20,355)	(6,158)	(7)	(26,520)
Reallocation and other transfers	(4,843)	4,696	(110)	(257)
Reversal of impairment of mining assets and in-house service (note 6)	(42,755)	(8,013)	(1,391)	(52,159)
Foreign exchange differences	-	2,084	-	2,084
At 31 December 2019	1,405,097	129,616	-	1,534,713
Net book value	-			
At 31 December 2018 (h) (restated)	740 070	20.402	204.007	4 4 4 4 0 0 0
At 31 December 2019 (h)	719,973 1,104,179	39,183	384,907	1,144,063

⁽a) Including US\$27.1 million stripping cost capitalised (2018: US\$47.0 million).

⁽b) Borrowing costs were capitalised at the weighted average rate of the Group's relevant borrowings being 9.1% (2018: 9.3%).

⁽c) Being costs primarily associated with c the POX hub project and the Malomir flotation plant.

⁽d) Capital construction in progress includes US\$8.9 million costs associated with the POX Hub project (31 December 2018: US\$345.8 million).

⁽e) Including US\$13.8 million of fully depreciated fleet that is not suitable for future use due to wear and tear, US\$7.5 million disposals of mining fleet due to derecognition of the replaced part (31 December 2018: US\$18.1 million of fully depreciated mining fleet that is not suitable for future use due to wear and tear and US\$8.1 million disposals of mining fleet due to derecognition of the replaced part, US\$19.1 million disposals associated with expected closure of Pokrovskiy mine as the site is being transformed into a key component of the POX Hub, US\$5.8 million disposal of road due to the lack of need for further use).

⁽f) Including US\$485.2 million of fully depreciated property, plant and equipment (31 December 2018: US\$400.8 million).

⁽g) Corporate administration and in-house support function, including right-of-use assets. For the movement in the right-of-use assets during the period see note 23.

⁽h) Including US\$41.9 million net book value of capitalized stripping cost (31 December 2018: US\$47.0 million).

⁽i) See note 2 for details regarding the restatement, resulting in U\$\$39.8 million included in depreciation charge for 2018.

14. Investment in associate

	2019	2018
	US\$'000	US\$'000
IRC Limited ('IRC')	48,680	85,140
	48,680	85,140

Summarised financial information for the associate that is material to the Group is set out below.

	IRC	IRC
	2019	2018
	US\$'000	US\$'000
Non-current assets		
Exploration and evaluation assets	19,877	19,497
Property, plant and equipment	522,640	533,446
Other non-current assets	14,859	15,185
	557,376	568,128
Current assets		
Cash and cash equivalents	4,292	7,637
Other current assets	46,106	34,195
	50,398	41,832
Current liabilities		
Borrowings (a), (b)	(20,703)	(111,954)
Other current liabilities	(80,288)	(55,080)
	(100,991)	(167,034)
Non-current liabilities		
Borrowings (a), (b)	(201,204)	(100,915)
Other non-current liabilities	(27,578)	(22,501)
	(228,782)	(123,416)
Net assets	278,001	319,510

(a) 31 December 2019: Gazprombank Facility.

On 18 December 2018, IRC entered into two facility agreements for a loan in aggregate of US\$240 million (the "Gazprombank Facility"). The Gazprombank Facility will mature in 2026 and consists of two tranches. The principal under the first tranche amounts to US\$160 million with interest being charged at the London Inter-bank Offer Rate ("LIBOR") + 5.7% per annum and is repayable in equal quarterly payments during the term of the Gazprombank Facility, the final payment in December 2026. The principal under the second tranche amounts to US\$80 million with interest being charged at LIBOR + 7.7% per annum and is repayable in full at the end of the term, in December 2026. Interest charged on the drawn down amounts under the two tranches is payable in equal quarterly payments during the term of the Gazprombank Facility.

As at 31 December 2019, the entire facility amount of US\$240 million has been fully drawn down.

The Gazprombank Facility is secured by (i) IRC's property, plant and equipment with net book value of US\$27 million, (ii) 100% equity share of Kapucius Services Limited in LLC KS GOK and (iii) a guarantee from the Company. Please refer to the note 26 for the details on the guarantee arrangements. The Gazprombank Facility is also subject to certain financial covenants and requirements.

(b) 31 December 2018: including U\$\$158.8 million under ICBC Facility and loans provided by the Group (note 26) in the equivalent of U\$\$54.0 million. On 19 March 2019, IRC repaid the outstanding loan principal and interest under ICBC Facility in full and terminated the ICBC facility Agreement (the outstanding loan principal under ICBC Facility was U\$\$169.6 million as at 31 December 2018).

	IRC	IRC
	Year ended	Year ended
	31 December 2019	31 December 2018
	US\$'000	US\$'000
Revenue	177,164	151,549
Net operating (expenses)/income	(178,653)	(53,876)
Including:		
Depreciation	(28,504)	(21,208)
Reversal of impairment of mining assets	-	90,483
Foreign exchange (losses)/gains	(6,181)	4,554
Impairment of financial assets	-	(7,741)
Investment income	83	82
Interest expense	(40,421)	(21,679)
Taxation	3,157	(130)
(Loss)/profit for the year	(38,670)	68,205
Other comprehensive loss	(3,483)	(1,057)
Total comprehensive (loss)/profit	(42,153)	67,148
Group's share %	31.1%	31.1%
Group's share in (loss)/profit for the year	(12,026)	21,210
Impairment of investment in associate	(23,350)	(5,730)
Share of results of associate	(35,376)	15,480

Impairment of investment in associate

The Group undertook a review of impairment indicators of its investment in IRC. Detailed calculations of recoverable amounts, which are value-in-use calculations based on discounted cash flows, were prepared which concluded a US\$23.4 million impairment was required as at 31 December 2019 and recorded accordingly (31 December 2018: US\$5.7 million impairment was required and recorded accordingly). The key assumptions which formed the basis of forecasting future cash flows and the value in use calculation as at 31 December 2019 were real long-term 62% iron ore price of US\$65.8 per dry metric tonne and discount rate, being the post-tax real weighted average cost of capital, of 10%.

On 18 March 2020, the Group announced a preliminary agreement to dispose of its 29.9% out of 31.1.% interest in IRC as set out in note 31.

15. Inventories

		2018
	2019	(restated)
	US\$'000	US\$'000
Current		
Construction materials	6,600	6,267
Stores and spares	86,985	69,082
Ore in stockpiles (a), (b)	68,479	36,395
Gold in circuit	37,740	16,751
Bullion in process	4,732	606
Flotation concentrate	97,932	25,654
Other	5,305	4,101
	307,773	158,856
Non-current		
Ore in stockpiles (a), (b), (c)	60,257	56,805
	60,257	56,805

⁽a) As at 31 December 2019, ore in stockpiles include balances in the aggregate of US\$0.1 million carried at net realisable value (2018: US\$10.1 million).

⁽b) For details of ore stockpile impairments see note 6.

⁽c) Ore in stockpiles that is not planned to be processed within twelve months after the reporting period

16. Trade and other receivables

	2019	2018
	US\$'000	US\$'000
Current		
VAT recoverable	51,499	20,474
Advances to suppliers	10,513	5,919
Prepayments for property, plant and equipment	9,216	7,233
Trade receivables ^(a)	10,254	13,389
Contract assets	2,856	3,307
Guarantee fee receivable (b)	9,417	6,829
Other debtors (c)	12,220	9,590
	105,975	66,741
Non-current		
Other	556	547
	556	547

 ⁽a) Net of provision for impairment of US\$1.2 million (2018: US\$0.9 million). Trade receivables are generally settled in less than three months.
 (b) Please refer to 14 and 26 for the details of ICBC and Gazprombank guarantee arrangements.

The Directors consider that the carrying amount of trade and other receivables approximates their fair value.

17. Cash and cash equivalents

	2019	2018
	US\$'000	US\$'000
Cash at bank and in hand	14,181	10,682
Short-term bank deposits	33,972 ^(a)	15,470
	48,153	26,152

⁽a) Including US\$1.1 million of restricted bank deposit as at 31 December 2019 (31 December 2018: US\$nil).

⁽c) Net of provision for impairment of US\$1.7 million (2018: US\$1.1 million).

18. Derivative financial instruments

	31 December 2019		31 Decemb	per 2018
	Assets	Liabilities	Assets	Liabilities
	US\$'000	US\$'000	US\$'000	US\$'000
Current				
Forward gold contracts – cash flow hedge (a), (b), (c)	-	-	-	(8,819)
Call Option over the Company's shares (d)	-	-	-	(1,136)
Other	-	(266)	-	-
		(266)		(9,955)
Non-current				
Conversion option (e), (f)	-	(46,313)	-	(2,411)
Call option over non-controlling interests (g), (h), (i)	11,022	· · · · ·	-	-
	11,022	(46,313)	-	(2,411)

- (a) No forward contracts to sell gold are outstanding as at 31 December 2019 (31 December 2018: 200,000 ounces of gold at an average price of US\$1,252 per ounce).
- (b) Measured at fair value and considered as Level 2 of the fair value hierarchy which valuation incorporates the following inputs:
 - gold forward curves observable at quoted intervals; and
 - observable credit spreads.
- (c) The hedged forecast transactions were expected to occur at various dates during the period to December 2019.

Gain and losses recognised in the hedging reserve in equity as at the reporting date are recognised in the statement of profit or loss in the periods during which the hedged gold sale transactions occur.

There was no ineffectiveness to be recorded from the cash flow hedge during the years ended 31 December 2019 and 2018.

- (d) Cash settled call option issued in relation to 3.6 per cent. of the outstanding aggregate ordinary share capital in the Company exercisable between December 2018 and June 2019 at strike price of £0.068 and exercised during year ended 31 December 2019 resulting in the net cash settlement paid by the Group of an aggregate of US\$2.2 million.
- (e) Note 20.
- (f) Measured at fair value and considered as Level 3 of the fair value hierarchy which valuation incorporates the following inputs:
 - the Group's credit risk and implied credit spreads (Level 3);
 - historic share price volatility;
 - conversion price;
 - time to maturity; and
 - risk free rate.
- (g) Call option to acquire non-controlling 25% interest in the Group's subsidiary LLC TEMI: In May 2019, the Group entered into the option contract to acquire non-controlling 25% interest in LLC TEMI from its shareholder Agestinia Trading Limited for an aggregate consideration of US\$60 million (adjusted to US\$53.5 million if certain conditions are met). LLC TEMI holds the licences for the Elginskoye Ore Field and Afanasievskaya Prospective Ore Are, which have substantial non-refractory gold reserves and resources, suitable for processing at the Albyn Plant. Further details on this transaction are set out in note 26.
- (h) Measured at fair value and considered as Level 3 of the fair value hierarchy which valuation incorporates the following inputs:
 - the current valuation of the underlying investment (Level 3);
 - historic peers' volatility attributed to the valuation of the underlying investment (Level 3);
 - the exercise price;
 - time to maturity; and
 - risk free rate.
- (i) The fair value of the TEMI option at 31 December 2019 is US\$11.0 million, which represent the premium paid to acquire the option of US\$13.0 million less a subsequent revaluation loss of US\$2.0 million.

The fair value of the option was initially recognised as US\$9.6 million upon initial recognition, resulting in a corresponding gain recognised within Net other finance gains and losses in the statement of profit or loss. This gain on initial recognition was primarily due to improvement in the gold price outlook between the pricing and completion of the transaction together with the judgements taken with regards to certain inputs into the relevant valuation models, in particular, historic volatility used as a proxy of the expected volatility of the underlying assets and being historic volatility of the comparable listed companies used for the valuations under IFRS 13 as opposed to historic gold market volatility used for the valuation of the contractual option premium.

In the condensed consolidated interim financial statements for the six months ended 30 June 2019 the fair value of the call option, net of the remaining unpaid premium, was recognised at US\$16.2 million, comprising the initial gain of \$9.6 million, a revaluation loss of \$0.4 million and the premium paid to date of \$7.0 million, with a corresponding net gain of US\$9.2 million recognised within Net other finance gains and losses in the statement of profit or loss. After further analysis and consideration of the IFRS 9 application guidance (which prohibits the recognition of day 1 gains based on valuation techniques that use unobservable inputs), this economic gain previously recognised in the period ended 30 June 2019 has now been deferred for accounting purposes.

19. Trade and other payables

	2019	2018
	US\$'000	US\$'000
Current		
Trade payables (a)	134,818	50,099
Payables for property, plant and equipment	5,810	5,242
Advances from customers (b)	188,968	131,752
Advances received on resale contracts (c)	7,698	5,432
Accruals and other payables	51,747	27,320
	389,041	219,845
Non-current		
Advances from customers (d)	-	33,779
	-	33,779

- (a) The trade payables as at 31 December 2019 include US\$81.0 million payable for flotation concentrate purchased (31 December 2018: US\$nil).
- (b) The current advances from customers as at 31 December 2019 include US\$152.5 million (31 December 2018: US\$86.0 million) and US\$34.9 million (31 December 2018: US\$44.0 million) advance payments received from Gazprombank and Sberbank, respectively, under gold sales agreements. Advance payments are to be settled against physical delivery of gold produced by the Group in regular intervals over the period of up to twelve months from the reporting date based on the sales price prevailing at delivery that is determined with reference to LBMA fixing. For details of interest charged in relation to the aforementioned advances please refer to note 9.
- (c) Amounts included in advances received on resale contracts at 31 December 2019 and 31 December 2018 relate to services performed by the Group's subsidiary, Irgiredmet, in its activity to procure materials such as reagents, consumables and equipment for third parties.
- (d) The non-current advances from customers as at 31 December 2019 include US\$nil (31 December 2018: US\$33.8 million) advance payments received from Gazprombank under gold sales agreements. Advance payments are to be settled against physical delivery of gold produced by the Group in regular intervals over the period after twelve months from the reporting date based on the sales price prevailing at delivery that is determined with reference to LBMA fixing. For details of interest charged in relation to the aforementioned advances please refer to note 9.

The Directors consider that the carrying amount of trade and other payables approximates to their fair value.

20. Borrowings

	2019	2018
	US\$'000	US\$'000
Borrowings at amortised cost		
Notes (a)	500,377	499,007
Convertible bonds (b), (c)	109,086	95,170
	609,463	594,177
Amount due for settlement after 12 months	609,463	594,177
	609,463	594,177

- (a) US\$500 million Guaranteed Notes due for repayment on 14 November 2022 (the "Notes"), measured at amortised cost. The Notes were issued by the Group's wholly owned subsidiary Petropavlovsk 2016 Limited and are guaranteed by the Company and its subsidiaries JSC Pokrovskiy Rudnik, LLC Albynskiy Rudnik and LLC Malomirskiy Rudnik. The Notes have been admitted to the official list of the Irish Stock Exchange and to trading on the Global Exchange Market of the Irish Stock Exchange on 14 November 2017. The Notes carry a coupon of 8.125% payable semi-annually in arrears. The interest charged was calculated by applying an effective interest rate of 8.35%.
- (b) 31 December 2019: Debt component of the US\$125 million Convertible Bonds due on 03 July 2024 measured at amortised cost and not revalued. The bonds were issued by the Group's wholly owned subsidiary Petropavlovsk 2010 Limited (the "Issuer") on 03 July 2019 and are guaranteed by the Company. The bonds carry a coupon of 8.25% per annum, payable quarterly in arrears. The bonds are, subject to certain conditions, convertible into fully paid ordinary shares of the Company with an initial exchange price of US\$0.1350, subject to customary adjustment provisions. The interest charged was calculated by applying an effective interest rate of 12.08%.

The Group has used the US\$120.6 million net proceeds from the issue of US\$125 million Convertible Bonds to fund the repurchase of the outstanding US\$100 million convertible bonds as set out below, resulting in the net US\$12.6 million cash inflow.

Concurrently with the issue of the US\$125 million Convertible Bonds, the Group also concluded the invitation to repurchase (the "Repurchase") any and all of the outstanding US\$100 million 9.00% convertible bonds due 2020 (the "Existing Bonds"). Holders whose Existing Bonds have been accepted for purchase by the Issuer pursuant to the Repurchase were eligible to receive US\$1,080 per US\$1,000 in principal amount of the Existing Bonds (the "Repurchase Price"). The Issuer also paid, in respect of Existing Bonds accepted for purchase pursuant to the Repurchase, a cash amount representing the accrued but unpaid interest ("Accrued Interest") on each US\$1,000 in aggregate principal amount of Existing Bonds accepted for repurchase from and including 18 June 2019, being the immediately preceding interest payment date applicable to the Existing Bonds, to but excluding the settlement date for the Repurchase (the "Repurchase Settlement Date"). The Accrued Interest, based on a Repurchase Settlement Date of 3 July 2019 comprised US\$3.75 per US\$1,000 in aggregate principal amount of Existing Bonds.

The remaining Existing Bonds were redeemed at the Repurchase Price on 9 July 2019. The Issuer also paid a cash amount representing the Accrued Interest on each US\$1,000 in aggregate principal amount of Existing Bonds from and including 18 June 2019 to redemption.

The Existing Bonds were subsequently cancelled by the Issuer. The US\$11.2 million difference between the US\$108.0 million paid to fund the Repurchase Price and the carrying value of the Existing Bonds at redemption was recognized as loss on repurchase of the Existing Bonds (note 9).

The conversion option of the US\$125 million Convertible Bonds represents the fair value of the embedded option for the bondholders to convert into the equity of the Company (the "Conversion Right"). As the Company can elect to pay the cash value in lieu of delivering the Ordinary Shares following the exercise of the Conversion Right the conversion option is a derivative liability. Accordingly, the conversion option is measured at fair value and is presented separately within derivative financial liabilities (note 18) which the fair value loss is included in the net other finance (losses)/ gains (note 9).

As at 31 December 2019, the fair value of debt component of the convertible bonds, considered as Level 3 of the fair value hierarchy, amounted to US\$122.8 million, with the carrying value of US\$109.0 million. Valuation incorporates the following inputs: the Group's credit risk and implied credit spreads, time to maturity and risk free rate.

As at 31 December 2019, the fair value of the convertible bonds, considered as Level 1 of the fair value hierarchy and calculated by applying the market traded price to the convertible bonds outstanding, amounted to US\$169.1 million.

(c) 31 December 2018: Debt component of the Existing Bonds due on 18 March 2020, measured at amortised cost. The interest charged was calculated by applying an effective interest rate of 13.89% to the liability component.

The conversion option of the US\$100 million Convertible Bonds represents the fair value of the embedded option for the bondholders to convert into the equity of the Company (the "Conversion Right"). As the Company can elect to pay the cash value in lieu of delivering the Ordinary Shares following the exercise of the Conversion Right, the conversion option is a derivative liability. Accordingly, the conversion option is measured at fair value and is presented separately within derivative financial liabilities.

As at 31 December 2018, the fair value of debt component of the convertible bonds, considered as Level 3 of the fair value hierarchy, amounted to US\$86.8 million. Valuation incorporates the following inputs: the Group's credit risk and implied credit spreads, time to maturity and risk free rate.

As at 31 December 2018, the fair value of the convertible bonds, considered as Level 1 of the fair value hierarchy and calculated by applying the market traded price to the convertible bonds outstanding, amounted to US\$89.2 million.

The US\$100 million Convertible Bonds were refinanced in July 2019 as set out above.

21. Deferred taxation

	2019	2018
	US\$'000	US\$'000
At 1 January	113,354	72,380
Deferred tax (credited)/charged to profit or loss (a)	(2,414)	36,628
Deferred tax charged to equity	1,631	4,376
Exchange differences	(5)	(30)
At 31 December	112,566	113,354
Deferred tax liabilities	(112,566)	(113,354)
Net deferred tax liability	(112,566)	(113,354)

(a) Note 10.

	At 1 January 2019 US\$'000	Charged/(credited) to profit or loss US\$'000	Charged directly to equity US\$'000	Exchange differences US\$'000	At 31 December 2019 US\$'000
Property, plant and equipment	121,800	9,063	-	14	130,877
Inventory	11,264	(2,823)	-	(50)	8,391
Exploration and evaluation assets	7,088	938	-	-	8,026
Other temporary differences	(3,183)	163	1,631	31	(1,358)
Tax losses carried forward (a)	(23,615)	(9,755)	-	-	(33,370)
	113,354	(2,414)	1,631	(5)	112,566

⁽a) Deferred tax recognised in relation to unused tax losses of JSC Pokrovskiy mine, LLC Malomirskiy Rudnik, LLC TEMI and in-house service companies to the extent that it is either probable that future taxable profit will be available against which the unused tax losses can be utilised or there are sufficient taxable temporary differences.

	At 1 January	Charged/(credited)	Charged directly to	Exchange	At 31 December
	2018	to profit or loss	equity	differences	2018
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
Property, plant and equipment	81,836	40,046	-	(82)	121,800
Inventory	8,540	2,958	-	(234)	11,264
Exploration and evaluation assets	8,070	(982)	-	-	7,088
Fair value adjustments	6	(6)	-	-	-
Other temporary differences	(1,494)	(6,351)	4,376	286	(3,183)
Tax losses carried forward (b)	(24,578)	963	-	-	(23,615)
	72,380	36,628	4,376	(30)	113,354

⁽b) Deferred tax recognised in relation to unused tax losses of LLC Malomirskiy Rudnik and LLC TEMI to the extent that it is either probable that future taxable profit will be available against which the unused tax losses can be utilised or there are sufficient taxable temporary differences.

As at 31 December 2019, the Group did not recognise deferred tax assets in respect of the accumulated unused tax losses comprising US\$718.8 million (2018: US\$595.4 million) on the basis that there is no certainty about future taxable profit of relevant entities against which the unused tax losses can be utilised or there are insufficient relevant taxable temporary differences. Tax losses of US\$535.4 million (2018: US\$566.0 million) and corporate interest restriction disallowances of US\$155.6 million (2018: US\$117.8 million) arise in the UK and tax losses of US\$26.7 million (2018: US\$28.8 million) arise in Russia, both can be carried forward indefinitely.

As at 31 December 2019, the Group did not recognise deferred tax assets of US\$7.8 million (2018: US\$2.6 million) in respect of deductible temporary differences arising on close down and restoration costs.

The Group has not recorded a deferred tax liability in respect of withholding tax and other taxes that would be payable on the unremitted earnings associated with investments in its subsidiaries and associate as the Group is able to control the timing of the reversal of those temporary differences and does not intend to reverse them in the foreseeable future. As at 31 December 2019, statutory unremitted earnings comprised in aggregate US\$960.1 million (2018: US\$845.3 million).

22. Provision for close down and restoration costs

	2019	2018
	US\$'000	US\$'000
At 1 January	21,388	21,004
Unwinding of discount	550	425
Change in estimates ^(a)	14,293	138
Amounts charged against provision	-	(179)
At 31 December	36,231	21,388
Amount due for settlement within 12 months	-	804
Amount due for settlement after 12 months	36,231	20,584
	36,231	21,388

⁽a) Primarily reflects the effect of change in the forecast the Russian Rouble to the US Dollar exchange rate and the inflation rate.

The Group recognised provisions in relation to close down and restoration costs for the following mining operations:

	2019	2018(b)
	US\$'000	US\$'000
POX Hub/Pokrovskiy (a)	7,401	6,008
Pioneer	12,864	6,688
Malomir	10,630	4,981
Albyn	5,336	3,711
	36,231	21,388

⁽a) With the closure of Pokrovskiy mine in 2018, as the site was transformed into a key component of the POX Hub, the associated amounts of close down and restoration costs were attributed to the POX project accordingly.

The provision recognised represents the present value of the estimated expenditure that will be incurred, which has been arrived at using the long-term risk-free pre-tax cost of borrowing. The expenditure arises at different times over the life of mine. The expected timing of significant cash outflows is between years 2021 and 2038 varying from mine site to mine site.

⁽b) The allocation of the provisions between the mining operations and the comparative financial information has been updated to align with the 2019 presentation.

23. Lease liabilities

The following information is in relation to transactions for which the Group is a lessee (for leases where the Group is a lessor, see note 29).

Movement in the lease liabilities during the year ended 31 December 2019 was as follows:

	US\$' 000
At 1 January 2019	1,739
Additions	13,279
Interest expense	593
Payment of lease liabilities, including interest expense	(1,879)
Disposals	(1,124)
Foreign exchange differences	570
At 31 December 2019	13,178
Amount due for settlement within 12 months	5,373
Amount due for settlement after 12 months	7,805
	13,178

The associated right-of-use assets were measured at the amount equal to the lease liabilities adjusted for prepaid and accrued lease payments in accordance with IFRS 16. The recognised right-of-use assets relate to the rent of office premises and other non-mining assets.

The movement in the right-of-use asset during the year ended 31 December 2019 was as follows:

	US\$' 000
At 1 January 2019	1,739
Lease assets recognised under IAS 17 as at 31 December 2018	79
Additions	13,279
Disposals	(958)
Depreciation	(2,423)
Translation difference	9
At 31 December 2019	11,725

The statement of profit or loss shows the following amounts relating to leases where the group is a lessee:

	US\$' 000
Depreciation charge of right-of-use assets	2,423
Interest expense	593
Expense relating to short-term leases	2,169
Expense relating to leases of low-value that are not shown above as short-term leases	49

24. Share capital

	2019		2018	3
	No of shares	US\$'000	No of shares	US\$'000
Allotted, called up and fully paid				
At 1 January	3,307,151,712	48,963	3,303,768,532	48,920
Issued during the period	3,058,569	40	3,383,180	43
At 31 December	3,310,210,281	49,003	3,307,151,712	48,963

The Company has one class of ordinary shares which carry no right to fixed income.

25. Notes to the statement of cash flows

Reconciliation of profit before tax to operating cash flow

	2019	2018
	US\$'000	US\$'000
Profit before tax	52,939	82,418
Adjustments for:		
Share of results of associate	35,376	(15,480)
Net (impairment reversals)/impairment losses on financial		
instruments	(30,797)	28,634
Investment and other finance income	(8,826)	(3,775)
Interest expense	59,854	29,520
Net other finance losses/(gains)	42,190	(10,185)
Share based payments	280	416
Depreciation	137,775	142,003
Impairment of exploration and evaluation assets	-	12,192
(Reversal of impairment)/impairment of ore stockpiles	(2,778)	18,021
Effect of processing previously impaired stockpiles	(6,398)	(10,496)
Provision for impairment of trade and other receivables	2,280	1,435
Impairment of gold in circuit	142	2,124
Effect of processing previously impaired gold in circuit	(1,413)	(3,384)
Loss/(gain) on disposals of property, plant and equipment	1,118	(862)
Foreign exchange losses/(gains)	20,808	(8,450)
Reversal of impairment of mining assets and in-house service	(52,159)	(101,695)
Other non-cash items	129	(106)
Changes in working capital:		
Increase in trade and other receivables	(31,204)	(18,510)
Increase in inventories	(133,848)	(18,833)
Increase in trade and other payables	103,853	204,827
Net cash generated from operations	189,321	329,814

Reconciliation of cash flows used to purchase property, plant and equipment

	2019	2018
	US\$'000	US\$'000
Additions to property, plant and equipment	125,524	174,241
Non-cash additions to property, plant and equipment:		
Transfer from materials	7,343	(747)
Capitalised depreciation	(737)	(293)
Right-of-use assets additions	(13,279)	(55)
-	118,851	173,146
Associated cash flows:		
Purchase of property, plant and equipment	120,798	178,201
Increase in prepayments for property, plant and equipment	(1,982)	(1,419)
(Decrease)/increase in payables for property, plant and equipment	568	(5,147)
Cash movements presented in other cash flow lines:		, ,
Changes in working capital	(533)	1,511
	118,851	173,146

Non-cash transactions

An equivalent of US0.1\$ million of VAT recoverable was offset against profit tax during the year ended 31 December 2019 and US\$1.5 million of provision of profit tax relating to Albyn, was accrued as at 31.December 2019. An equivalent of US\$8.0 million of VAT recoverable was offset against profit tax during the year ended 31 December 2018. There were no other significant non-cash transactions during the years ended 31 December 2019 and 2018.

26. Related parties

Related parties the Group entered into transactions with during the reporting period

The Petropavlovsk Foundation for Social Investment (the 'Petropavlovsk Foundation') is considered to be a related party due to the participation of the key management of the Group in the board of directors of the Petropavlovsk Foundation.

IRC Limited and its subsidiaries (Note 33) are associates to the Group and hence are related parties since 7 August 2015.

Transactions with related parties which the Group entered into during the years ended 31 December 2019 and 2018 are set out below.

Trading Transactions

Related party transactions the Group entered into that relate to the day-to-day operation of the business are set out below.

	Sales to related parties		Purchases from related parties	
	2019	2018	2019	2018
	US\$'000	US\$'000	US\$'000	US\$'000
Entities in which key management have interest and exercise a significant influence or control IRC Limited and its subsidiaries	- 42	- 164	4,046 5,458	764 681
	42	164	9,504	1,445

In March 2018, the Group entered into a transaction with the member of key management personnel to purchase the office building and land, which were subject to an operating lease arrangement. The aggregate consideration paid was an equivalent of c.US\$3.2 million. The transaction was completed in February 2019.

On 13 December 2019, the Group entered into the sale and purchase agreement with a seller (the "Seller"), a related party of the Company, LLC GMMC. Pursuant to the sale and purchase agreement, the Group agreed to purchase, and the Seller agreed to sell, a helicopter for a consideration of RUB316.7 million (equivalent to US\$5.0 million). At 31 December 2019, the contractual balance outstanding amounted to US\$4.5 million.

During the year ended 31 December 2019, the Group made US\$1.0 million charitable donations to the Petropavlovsk Foundation (2018: US\$0.4 million).

The outstanding balances with related parties at 31 December 2019 and 2018 are set out below.

	Amounts owed	Amounts owed by related parties		related parties
	2019	2018	2019	2018
	US\$'000	US\$'000	US\$'000	US\$'000
Entities in which key management have interest and exercise a				
significant influence or control	-	1,556	759	-
IRC Limited and its subsidiaries	3,651	2,078	5,863	976
	3,651	3,634	6,622	976

Financing transactions

Guarantee over IRC's external borrowings

The Group historically entered into an arrangement to provide a guarantee over its associate's, IRC, external borrowings, the ICBC Facility ('ICBC Guarantee'). At 31 December 2018 the principal amounts outstanding subject to the ICBC guarantee were US\$169.6 million. Under the terms of the arrangement the Group was entitled to receive an annual fee equal to 1.75% of the outstanding amount, which amounted to US\$0.7 million during the year ended 31 December 2019 (31 December 2018: US\$4.0 million).

In March 2019, IRC has refinanced the ICBC Facility through entering into a US\$240 million new facility with Gazprombank ('Gazprombank Facility'). The facility was fully drawn down during the year ended 31 December 2019 and was used, inter alia, to repay the amounts outstanding under the ICBC Facility in full, the two loans provided by the Group in the equivalent of approximately US\$57 million and part of the ICBC Guarantee fee of US\$6 million owed by IRC to the Group. At 31 December 2019 the remaining outstanding contractual guarantee fee was US\$5.0 million, which had a corresponding fair value of US\$4.4 million and is payable by IRC no later than 31 December 2020 (31 December 2018: outstanding contractual guarantee fee of US\$10.3 million with a corresponding fair value of US\$6.8 million).

A new guarantee was issued by the Group over part of the Gazprombank Facility ('Gazprombank Guarantee'), the guarantee mechanism is implemented through a series of five guarantees that fluctuate in value through the eight-year life of the loan, with the possibility of the initial US\$160 million principal amounts guaranteed reducing to US\$40 million within two to three years, subject to certain conditions being met. For the final two years of the Gazprombank Facility, the guaranteed amounts will increase to US\$120 million to cover the final principal and interest repayments. If certain springing recourse events transpire, including default on a

scheduled payment, then full outstanding loan balance is accelerated and subject to the guarantee. The outstanding loan principal was US\$225 million as at 31 December 2019. Under the Gazprombank Guarantee arrangements, the guarantee fee receivable is determined at each reporting date on an independently determined fair value basis, which for the year ended 31 December 2019 was at the annual rate of 3.07% for 2019 by reference to the average outstanding principal balance under Gazprombank Facility. The guarantee fee charged for 2019 was US\$5.6 million, with corresponding value of US\$5.0 million after provision for expected credit losses.

On 18 March 2020, the Group announced a preliminary agreement to dispose of its 29.9% out of 31.1% interest in IRC to Stocken Board AG for a cash consideration of US\$10 million, subject to certain conditions precedent being met, including the release of the Group's obligation to guarantee IRC's debt under the Gazprombank Facility (note 31).

The following assets and liabilities have been recognised in relation to the ICBC Guarantee and Gazprombank Guarantee as at 31 December 2019 and 31 December 2018:

	31 December 2019	31 December 2018
	US\$'000	US\$'000
Other receivables – ICBC Guarantee (a)	4,436	6,829
Other receivables – Gazpombank Guarantee (b)	4,981	-
Financial guarantee contract – ICBC Guarantee (c)	<u>-</u>	37,387
Financial guarantee contract – Gazprombank Guarantee (d)	8,923	<u> </u>

- (a) The fair value of the receivable, comprising billed fee receivable (31 December 2018: both billed and future fee receivable), less provision for credit losses. Considered Level 3 of the fair value hierarchy which valuation incorporates the following inputs:
 - Assessment of the credit standing of IRC and implied credit spread;
 - Share price and share price volatility of IRC as at 31 December 2019 and 2018;
- (b) Amounts of guarantee fee for the period that are expected to be received from IRC and calculated by applying annual rate of 3.07% for 2019 by reference to the average outstanding principal balance under Gazprombank Facility for the period from 19 March 2019 until 31 December 2019, less provision for ECL.
- (c) Measured in accordance with ECL model: the amount of the loss allowance equals to the lifetime ECL as it has been concluded that the credit risk on the financial guarantee contract had increased significantly since initial recognition, which reflected declining credit status of IRC prior to the refinancing through Gazprombank Facility completed in March 2019.
- (d) Measured in accordance with ECL model: the amount of the loss allowance equals to 12-month ECL as it has been concluded that the credit risk on the financial guarantee contract has not increased significantly since initial recognition (note 3.1.)

The results from relevant re-measurements of the aforementioned assets and liabilities were recognised within Other finance gains and losses and impairments of financial instruments (note 9).

Loans issued to IRC

In June 2018, the Group provided a Rouble denominated unsecured loan to IRC in the amount of RUB1,878 million (an equivalent of US\$29.75 million). The loan carried interest of 12% per annum. The loan was recognised net of lifetime ECL of US\$0.5 million at inception and further US\$0.8 million impairment based on ECL model was recognised during the year ended 31 December 2018. The loan was fully repaid in March 2019 with consequent reversal of US\$1.3 million previously recognised ECL (note 9).

In December 2018, the Group provided a dollar denominated unsecured loan to IRC in the amount of US\$27.0 million. The loan carried interest of 16% per annum. The loan was recognised net of lifetime ECL of US\$1.9 million at inception. The loan was fully repaid in March 2019 with consequent reversal of US\$1.9 million previously recognised ECL (note 9).

Other financing transactions

In March 2018, the Group entered into a loan agreement with Dr Pavel Maslovskiy. At 31 December 2019, the loan principal outstanding amounted to an equivalent of US\$0.2 million (2018: US\$0.2 million). Interest charged during the year ended 31 December 2019 comprised an equivalent of US\$0.01 million (2018: US\$0.01 million).

In April 2019, the Group entered into a loan agreement with Dr Alya Samokhvalova. At 31 December 2019, the loan principal outstanding amounted to an equivalent of US\$0.4 million. Interest charged during the year ended 31 December 2019 comprised an equivalent of US\$0.02 million.

Investing transactions

In May 2019, the Group entered into the option contract to acquire the remaining non-controlling 25% interest in the subsidiary LLC TEMI from Agestinia Trading Limited, a non-controlling holder of 25% interest in LLC TEMI, for an aggregate consideration of US\$60 million (adjusted to US\$53.5 million if certain conditions are met). This represents a related party transaction as it is over the equity of a subsidiary company. The option premium payable is US\$13 million, which was paid during the year ended 31 December 2019. The exercise period of the option is 730 days from 22 May 2019.

The Group employed an independent third party expert to undertake the valuations of the underlying 25% interest in LLC TEMI and the call option. As at 31 December 2019, the fair value of the derivative financial asset was US\$11.0 million reflecting a loss on remeasurement to fair value of US\$2.0 million and the initial US\$13 million cash payment (note 18).

There are no other related party relationships with Agestinia Trading Limited present.

Key management compensation

Key management personnel, comprising a group of 14 individuals during the period (2018: 16), including Executive and Non-Executive Directors of the Company and members of senior management, are those having authority and responsibility for planning, directing and controlling the activities of the Group.

	2019	2018
	US\$'000	US\$'000
Wages and salaries	5,794	7,761
Pension costs	62	136
Share-based compensation	157	404
	6,013	8,301

27. Analysis of Net Debt

	At 1 January 2019 US\$'000	Net cash Movement US\$'000	Exchange movement US\$'000	Non-cash changes US\$'000	At 31 December 2019 US\$'000
Cash and cash equivalents	26,152	19,630	2,371	-	48,153
Borrowings	(594,177)	38,128 ^(a)	-	(53,414) ^(b)	(609,463)
Net Debt [♦]	(568,025)	57,758	2,371	(53,414)	(561,310)
Lease liabilities (c)	(1,739)	1,879	(570)	(12,748)	(13,178)
Conversion option (d)	(2,411)	-	-	(43,902)	(46,313)
Call option over Company's shares	(1,136)	2,215	-	(1,079)	-
	(573,311)	61,852	1,801	(111,143)	(620,801)

⁽a) Being US\$50.7 million interest paid on borrowings, which is presented as operating cash flows in the Statement of cash flows, and US\$12.6 million net cash inflow from the issue of US\$125 million Convertible Bonds and the repurchase of the outstanding US\$100 million convertible bonds (note 20).

⁽d) Notes 18, 20 and 28.

	At 1 January 2018 US\$'000	Net cash Movement US\$'000	Exchange movement US\$'000	Non-cash changes US\$'000	At 31 December 2018 US\$'000
Cash and cash equivalents	11,415	17,719	(2,982)	-	26,152
Borrowings	(596,474)	57,845 ^(e)	-	(55,548) ^(f)	(594,177)
Net Debt [♦]	(585,059)	75,564	(2,982)	(55,548)	(568,025)
Conversion option (g)	(14,110)	-	-	11,700	(2,411)
Call option over Company's shares	(3,097)	-	-	1,961	(1,136)
	(602,266)	75.564	(2.982)	(41.887)	(571.572)

⁽e) Being US\$53.8 interest paid on borrowings, which is presented as operating cash flows in the Statement of cash flows, and US\$4.0 million repayment of bank loan.

28. Financial instruments and financial risk management

Capital risk management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to optimise the weighted average cost of capital and tax efficiency subject to maintaining sufficient financial flexibility to undertake its investment plans.

The capital structure of the Group consists of Net Debt[†] (as detailed in note 27) and equity (comprising issued capital, reserves and retained earnings). As at 31 December 2019, the capital comprised US1.2 billion (2018: US\$1.2 billion).

In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt. The Group adopts a modular approach in developing its

⁽b) Being principally accrued interest expense which is presented as operating cash flows in the Statement of cash flows when paid (note 9).

⁽c) Note 23.

⁽f) Being accrued interest expense which is presented as operating cash flows in the Statement of cash flows when paid (note 9).

⁽g) Notes 18, 20 and 28.

[•] Net Debt is an Alternative Performance Measure (APM), which is not defined or calculated in accordance with IFRS. Go to "The Use and Application of Alternative Performance Measures (APMs)" section for further information on our APMs.

projects in order to minimise upfront capital expenditure and related funding requirements. The Group manages in detail its funding requirements on a 12 month rolling basis and maintains a five year forecast in order to identify medium-term funding needs.

The Group is not subject to any externally imposed capital requirements.

As at 31 December 2019, there are no material offsetting contracts (2018: none).

Significant accounting policies

Details of significant accounting policies and methods adopted, including the criteria for recognition, the basis of measurement and the basis on which income and expenses are recognised, in respect of each class of financial asset, financial liability and equity instrument are disclosed in note 2 to the consolidated financial statements.

Categories of financial instruments

	2019	2018
Financial assets	US\$'000	US\$'000
Financial assets at amortised cost		
Cash and cash equivalents	48,153	26,152
Trade receivables and contract assets	13,110	13,389
Loans granted to an associate	13,110	50,966
Other financial assets at amortised cost	10,441	5.271
	10,441	5,271
Financial assets at FVPL		
Guarantee fee receivable	4,436	6,829
Listed equity securities	286	590
Derivative financial instruments	11,022	-
Financial liabilities		
Financial liabilities at amortised cost		
Trade and other payables	143,706	58,343
Borrowings	609,463	594,177
Lease liabilities	13,178	-
Derivative financial instruments	46,579	12,366
Financial guarantee contract	8,923	37,387

Fair value measurements

Recurring fair value measurements are set out below.

31 December 2019	Level 1 US\$' 000	Level 2 US\$' 000	Level 3 US\$' 000	Total US\$' 000
Financial assets				
Financial assets at FVPL:				
Guarantee fee receivable	-	-	4,436	4,436
Listed equity securities	286	-	-	286
Call option over non-controlling interests	-	-	11,022	11,022
Total financial assets	286	-	15,458	15,694
Financial liabilities				
Conversion option	-	-	46,313	46,313
Other	-	266	-	266
Total financial liabilities	-	266	46,313	46,579
31 December 2018	Level 1 US\$' 000	Level 2 US\$' 000	Level 3 US\$' 000	Total US\$' 000
Financial assets				
Financial assets at FVPL:				
Guarantee fee receivable	-	-	6,829	6,829
Listed equity securities	590	-	-	590
Total financial assets	590	-	6,829	7,419
Financial liabilities				_
Forward gold contracts – cash flow hedge	-	8,819		8,819
Call Option over the Company's shares	-	1,136	-	1,136
Conversion option	-	-	2,411	2,411
Total financial liabilities	-	9,955	2,411	12,366

There were no transfers between Levels 1, 2 and 3 for recurring fair value measurements during the year.

The changes in Level 3 items for the periods ended 31 December 2019 and 31 December 2018 are set out in the table below:

	Guarantee fee receivable US\$' 000	Call option over non- controlling interests	Conversion option	Total
		US\$' 000	US\$' 000	US\$' 000
1 January 2018	10,549	-	(14,110)	(3,561)
Gains/ (losses) recognised in net other finance gains/ (losses) (note 9)	(3,720)	-	11,700	7,980
31 December 2018	6,829	-	(2,411)	4,418
Purchases	-	13,000 ^(a)	-	13,000
Cash settlements	(6,000) (a)	-	-	(6,000)
Issue of convertible bonds (note 20)	-	-	(12,775)	(12,775)
Gains/ (losses) recognised in net other finance gains/ (losses) (note 9)	3,607	(1,978)	(31,127)	(29,498)
31 December 2019	4,436	11,022	(46,313)	(30,855)

(a) Note 20.

Valuation inputs and relationships to fair value

The quantitative information about the significant unobservable inputs used in level 3 fair value measurements is set out in the table below:

	Fair v: at 31 Dec 2019 US\$' 000		Unobservable inputs	Range of inputs	Relationship of unobservable inputs to fair value
Guarantee fee receivable (note 26)	4,436	6,829	 implied credit spread; 2018: likelihood of the proposed refinancing of IRC's debt being achieved 	- 12.4% (2018: 11.3%); - 2018: 72.4%	a reasonable change in unobservable inputs has been assessed to not result in a significantly different fair value measurement
Call option over non- controlling interests (notes 18, 26)	11,022	-	 the current valuation of the underlying investment; and historic peers' volatility attributed to the valuation of the underlying investment 	US\$71 million;40%	a reasonable change in unobservable inputs has been assessed to not result in a significantly different fair value measurement
Conversion option – US\$125 million convertible bonds due in 2025 (note 20)	(46,313)	-	 the Group's credit risk and implied credit spreads 	- 7.25%	1% increase in credit spread would result in US\$4.2 million increase in fair value
Conversion option – US\$100 million convertible bonds due in 2020 ^(note 20)	-	(2,411)	 the Group's credit risk and implied credit spreads 	- 10.5%	a reasonable change in unobservable inputs has been assessed to not result in a significantly different fair value measurement

Valuation processes

The Group employed independent third party experts to undertake valuations of all Level 3 financial instruments.

Financial risk management

The Group's activities expose it to interest rate risk, foreign currency risk, risk of change in the commodity prices, credit risk and liquidity risk. The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance.

Risk management is carried out by a central finance department and all key risk management decisions are approved by the Board of Directors. The Group identifies and evaluates financial risks in close cooperation with the Group's operating units. The Board provides written principles for overall risk management, as well as guidance covering specific areas, such as foreign exchange risk, interest rate risk, gold price risk, credit risk and investment of excess liquidity.

Interest rate risk

The Group has borrowings with fixed rate, which are carried at amortised cost. They are therefore not subject to interest rate risk as defined in IFRS 7, since neither the carrying amount nor the future cash flows will fluctuate because of a change in market interest rates. The Group does not have borrowings with variable interest rates.

Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange risk arising from fluctuations in currencies the Group transacts, primarily US Dollars, GB Pounds Sterling and Russian Roubles.

Exchange rate risks are mitigated to the extent considered necessary by the Board of Directors, through holding the relevant currencies. At present, the Group does not undertake any foreign currency transaction hedging.

The carrying amounts of the Group's foreign currency denominated monetary assets and monetary liabilities at period end are set out below.

	Ass	Assets		Liabilities	
	2019	2019 2018	2019	2018	
	US\$'000	US\$'000	US\$'000	US\$'000	
Russian Roubles	86,581	66,285	165,473	54,757	
US Dollars (a)	10,759	4,652	4,169	5,886	
GB Pounds Sterling	1,252	1,905	759	1,033	
EUR	22	22	603	2,301	
Other currencies	10	159	267	312	

⁽a) US Dollar denominated monetary assets and liabilities in Group companies with Rouble functional currency.

The table set out below illustrates the Group's profit sensitivity to changes in exchange rates by 25% (2018: 25%), representing management's assessment of a reasonably possible change in foreign exchange currency rates. The analysis was applied to monetary assets and liabilities at the reporting dates denominated in respective currencies.

	2019	2018
	US\$'000	US\$'000
Russian Rouble currency impact	19,723	2,882
US Dollar currency impact	1,647	309
GB Pounds Sterling currency impact	123	218
EUR currency impact	145	570
Other currencies	64	38

Credit risk

The Group's principal financial assets are cash and cash equivalents, comprising current bank accounts and amounts held on deposit with banks. In the case of deposits, the Group is exposed to a credit risk, which results from the non-performance of contractual agreements on the part of the contract party. The Group is also exposed to a credit risk in relation to the amounts guaranteed under the Gazprombank Facility (notes 14 and 26).

The Group's maximum exposure to credit risk is limited to the carrying amounts of the financial assets recorded in the consolidated financial statements as set out above and the US\$225 million outstanding principal under the Gazprombank Facility (notes 14 and 26).

The major financial assets are cash and cash equivalents of US\$48.2 million (2018: US\$26.2 million) and receivables from IRC with an aggregate carrying value of US\$12.3 million (2018: US\$58.9 million) (note 26). There is no significant concentration of credit risk with respect to trade receivables and contract assets. The credit risk on cash and cash equivalents is limited because the main counterparties are banks with high credit-ratings assigned by international credit-rating agencies as set out below. As at 31 December 2019, the credit rating for IRC, calculated as shadow credit rating using a Moody's scorecard methodology, was Caa2.

Counterparty	Credit rating	Carrying amount at 31 December 2019 US\$'000	Carrying amount at 31 December 2018 US\$'000
Gazprombank	BBB-	28,616	-
Sberbank	BBB	8,501	598
VTB	BBB-	5,936	14,841
Citibank	AA-	2,073	8,011
Barclays	A+	719	337
Raiffeisen	BBB	1,051	872
Other		1,257	1,493
		48,153	26,152

The analysis of loss allowances that have been recognised for financial assets and financial guarantee contracts is set out below:

	Trade receivables and contract assets	Loans granted to an associate	Other financial assets at amortised	Financial guarantee contract	Total
			cost		
	US\$' 000	US\$' 000	US\$' 000	US\$' 000	US\$' 000
Loss allowance at 1 January 2019	891	3,163	1,128	37,387	42,569
Increase in loss allowance	421	-	1,326	8,923	10,670
Written off during the year	(90)	-	-	-	(90)
Unused amount reversed	-	(3,163)	-	(37,387)	(40,550)
Exchange differences	(3)	-	(84)	-	(87)
Loss allowance at 31 December 2019	1,219	-	2,370	8,923	12,512

Commodity price risk

The Group generates most of its revenue from the sale of gold. The Group's policy is to sell its products at the prevailing market price. In 2019 and 2018, the Group has entered into gold forward contracts to protect cash flows from the volatility in the gold price (note 18).

Liquidity risk

Liquidity risk is the risk that suitable sources of funding for the Group's business activities may not be available. The Group constantly monitors the level of funding required to meet its short, medium and long-term obligations. The Group also monitors compliance with restrictive covenants set out in various loan agreements (note 20) to ensure there is no breach of covenants resulting in associated loans become payable immediately.

Effective management of liquidity risk has the objective of ensuring the availability of adequate funding to meet short-term requirements and due obligations as well as the objective of ensuring a sufficient level of flexibility in order to fund the development plans of the Group's businesses.

The table below details the Group's remaining contractual maturity for its financial liabilities with agreed repayment periods. The amounts disclosed are the contractual undiscounted cash flows and so these balances will not necessarily agree with the amounts disclosed in the statement of financial position. The contractual maturity is based on the earliest date on which the Group may be required to pay.

	0 - 3 months US\$'000	3 months - 1 year US\$'000	1 - 2 years US\$'000	2 - 3 years US\$'000	3 - 6 years US\$'000
2019					
Borrowings					
- Convertible bonds	-	-	-	-	125,000
- Notes	-	-	-	500,000	-
Future interest payments (a)	-	48,359	50,938	50,938	18,047
Trade and other payables	106,353	37,353	-	-	-
Lease liabilities	1,724	4,203	5,578	2,491	357
Financial guarantee contract (b)	225,000	-	-	-	-
Total non-derivative financial liabilities	333,077	89,915	56,516	553,429	143,404
		<u> </u>	· · · · · · · · · · · · · · · · · · ·	<u>.</u>	·
Other	266	-	-	-	-
Total derivative financial liabilities	266	-	-	-	-
2018					
Borrowings					
- Convertible bonds	-	-	100,000	-	-
- Notes	-	-	-	-	500,000
Future interest payments (a)	2,250	47,375	42,875	40,625	40,625
Trade and other payables	31,506	26,837	-	-	-
Financial guarantee contract	-	169,600	-	-	-
Total non-derivative financial liabilities	33,756	243,812	142,875	40,625	540,625
Forward gold contracts – cash flow					
hedge	1,536	7,283	-	-	-
Call Option over the Company's shares	1,136	· -	-	-	-
Total derivative financial liabilities	2,672	7,283	-	-	-

⁽a) Future interest payments have been estimated using interest rates applicable at 31 December. There are no borrowings that are subject to variable interest rates and, therefore, subject to change in line with the market rates.

(b) Note 26.

29. Operating lease arrangements

The Group as a Lessee (applicable prior to 1 January 2019)

The group adopted IFRS 16 on 1 January 2019 and recognised a right-of-use asset and lease liability (note 23). For the year ended 31 December 2018, the Group incurred rental expense, primarily associated with rent of office premises and rent of mining fleet, as set out below.

	2018 US\$'000
Minimum lease payments under operating leases recognised as an expense in	
the year	3,757

At 31 December 2018, the Group had outstanding commitments for future minimum lease payments under a non-cancellable operating lease for office premises and vehicles, which fall due as follows:

	2018
	US\$'000
Expiring:	
Within one year	929
In two to five years	468
	1,397

The Group as a Lessor

The Group earned property rental income during the year of US\$0.7 million (2018: US\$0.7million) on buildings owned by its subsidiary Irgiredmet.

30. Capital commitments

At 31 December 2019, the Group had entered into contractual commitments in relation to the acquisition of property, plant and equipment amounting to US\$10.7 million (31 December 2018: US\$9.5 million) including US\$7.4 million in relation to Pioneer Flotation project (31 December 2018: nill) and US\$2.5 million in relation to POX Hub project (31 December 2018: US\$6.8 million).

Investment agreement with the Russian Ministry of Far East Development

On 14 December 2015, the Group entered into an investment agreement with the Russian Ministry of Far East Development (the 'Investment Agreement'). The Investment Agreement involved provision of RUB5.5 billion (an equivalent to c.US\$89 million as at 31 December 2019) funding towards the construction of the electricity power line in the North-East of the Amur Region of Russia, where the Group's Albyn and Malomir mines and adjacent licence areas are operated, during the period from 2015 to 2019. The funds were passed through the Group to the joint-stock company Far East Grid Distribution Company ('DRSK'), which was required to engage a contractor to build the relevant power supply infrastructure. The Group's responsibility under the Investment Agreement was to monitor the progress and to report to the Russian Ministry of Far East Development. The Group was taking ultimate responsibility for the construction of the power line. Upon completion in November 2019, the Group got access to the enhanced capacity of the power supply infrastructure in the region. Under the terms of the Investment Agreement, the Group has certain capital commitments, including further development of Albyn and Malomir mines.

During 2019, the Group received RUB549 million (an equivalent to US\$8.8 million) in funding and transferred these funds to DRSK (2018: the Group did not receive and made no transfers of funds under the Investment Agreement).

31. Subsequent events

Covid-19

In the period subsequent to the 31 December 2019, the Covid-19 virus has spread globally although there has been no significant impact on the Group's mining operations, sales and supply chain, capital projects or employee health and safety as a result of Covid-19 to date. Further details are set out in the Annual Report.

The effects of Covid-19 and the marked decline in the oil price have contributed to a significant increase in the gold price and a significant decline in the Rouble exchange rate.

Preliminary agreement to dispose 29.9% interest in IRC

On 18 March 2020, the Group announced a preliminary agreement to dispose of 29.9% out of 31.1% interest in IRC to Stocken Board AG for a cash consideration of US\$10 million, subject to certain conditions precedent being met, including the release of the Group's obligation to guarantee IRC's debt under the Gazprombank Facility (note 26). This was a non-adjusting event and the investment was not considered to be an asset held-for-sale under IFRS 5 as at 31 December 2019. The rationale to support the transaction at the above terms was removal of the Gazprombank Guarantee and the risks associated with the guarantee arrangements.

32. Reconciliation of non-GAAP measures (unaudited)

	2019	2018
	US\$'000	(restated) US\$'000
Profit for the year	25,693	25,929
Add/(less):		
Net (impairment reversals)/impairment losses on financial instruments	(30,797)	28,634
Investment and other finance income	(8,826)	(3,775)
Interest expense	59,854	29,520
Net other finance losses/(gains)	42,190	(10,185)
Foreign exchange losses/(gains)	20,808	(8,450)
Taxation	27,246	56,489
Depreciation	137,775	142,003
Reversal of impairment of mining assets and in-house service	(52,159)	(101,695)
Impairment of exploration and evaluation assets	-	12,192
(Reversal of impairment)/impairment of ore stockpiles	(2,778)	18,021
Impairment of gold in circuit	142	2,125
Share of results of associate (a)	45,699	(8,065)
Underlying EBITDA [®]	264,847	182,743

⁽a) Group's share of interest expense, investment income, other finance gains and losses, foreign exchange gains/losses, taxation, depreciation and impairment/reversal of impairment recognised by the associate and impairment recognised against investment in the associate (note 14).

[•] Underlying EBITDA is an Alternative Performance Measure (APM), which is not defined or calculated in accordance with IFRS. Go to "The Use and Application of Alternative Performance Measures (APMs)" section for further information on our APMs.

33. Principal subsidiaries and other significant investments

The Group has the following principal subsidiaries and other significant investments, which were consolidated in this financial information.

Principal subsidiary, joint venture and associate	Country of incorporation	Principal activity Proportion of shares h by Petropavlovsk PLC		vsk PLC ^(a)	Proportion of sh the Gro	
undertakings			31 December 2019	31 December 2018	31 December : 2019	31 December 2018
Subsidiary						
JSC Management Company Petropavlovsk	Russia	Management company	100%	100%	100%	100%
Petropavlovsk 2010 Limited	Jersey	Finance company	100%	100%	100%	100%
Petropavlovsk 2016 Limited	Jersey	Finance company	100%	100%	100%	100%
JSC Pokrovskiy mine	Russia	Gold exploration and production	19.37%	19.37%	99.38%	99.38%
LLC Malomirskiy Rudnik	Russia	Gold exploration and production	-	-	99.94%	99.94%
LLC Albynskiy Řudnik	Russia	Gold exploration and production	100%	-	100%	100%
LLC Osipkan	Russia	Gold exploration and production		-	100%	100%
LLC Tokurskiy Rudnik	Russia	Gold exploration and production	-	-	100%	100%
LLC TEMI	Russia	Gold exploration and production	-	-	75%	75%
LLC AGPK	Russia	Gold exploration and production	-	-	99.38%	99.38%
LLC Perspektiva DV	Russia	Gold exploration and production	-	_	99.94%	99.94%
LLC Vostok Geologiya	Russia	Gold exploration and production	-	_	99.94%	99.94%
Universal Mining Inc.	Guyana	Gold exploration and production	-	_	100%	100%
LLC Kapstroi	Russia	Construction services	-	_	100%	100%
LLC NPGF Regis	Russia	Exploration services	-	_	100%	100%
CJSC ZRK Dalgeologiya	Russia	Exploration services	_	_	99.38%	99.38%
JSC PHM Engineering	Russia	Project and engineering	-	_	94%	94%
	110010	services			.,,	0.70
JSC Irgiredmet	Russia	Research services	_	_	99.69%	99.69%
LLC NIC Gydrometallurgia	Russia	Research services	_	_	100%	100%
LLC BMRP	Russia	Repair and maintenance	_	_	100%	100%
LLC AVT-Amur	Russia	Production of explosive	_	_	49%	49%
22071711101	rtabbia	materials			10 70	1070
LLC Transit	Russia	Transportation services	_	_	100%	100%
Pokrovskiy Mining College	Russia	Educational institute	_	_	99.38%	99.38%
Toktovskiy Willing College	ιτασσια	Educational motitate			33.3370	00.0070
Associate						
Associate		Management and holding	_	_	31.10%	31.10%
IRC Limited (b)	HK	company			0111070	01.1070
into Elimitod	1110	company				
IRC and its principal subsidia	ary and joint vent	ure undertakings ('IRC')				
IRC Limited	HK	Management and holding	_	_	31.10%	31.10%
INO LITIRED	TIIX	company			31.1076	31.1070
Principal subsidiaries of IRC		Company				
LLC Petropavlovsk-Iron Ore	Russia	Management company			31.10%	31.10%
LLC Olekminsky Rudnik	Russia	Iron ore exploration and		_	31.10%	31.10%
LLC Olekitiitisky Ruutiik	Nussia	production	-	-	31.10/0	31.10/6
LLC KS GOK	Russia	Iron ore exploration and			31.10%	31.10%
LLC NS GON	Russia	•	-	-	31.10%	31.10%
LLC Carinala, Mining 9	Dunnin	production			20.070/	20.070/
LLC Garinsky Mining &	Russia	Iron ore exploration and	-	-	30.97%	30.97%
Metallurgical Complex	Russia	production			31.10%	24 400/
LLC Kostenginskiy GOK	Russia	Iron ore exploration and	-	-	31.10%	31.10%
LLC Orlayaka Sakhatinakiy	Puggio	production			24 400/	24 400/
LLC Orlovsko-Sokhatinskiy	Russia	Iron ore exploration and	-	-	31.10%	31.10%
Rudnik	D	production			04.050/	04.050/
JSC Giproruda	Russia	Engineering services	-	-	21.85%	21.85%
LLC SHMTP	Russia	Infrastructure project	-	-	31.10%	31.10%
LLC Amursnab	Russia	Procurement services	-	-	31.07%	31.07%
Heilongjiang Jiatal Titanium	China	Titanium sponge project	-	-	31.10%	31.10%
Co., Limited					24 4224	
LLC Uralmining	Russia	Iron ore exploration and	-	-	31.10%	31.10%
		production			40 750/	40.750/
LLC Gorniy Park	Russia	Molybdenym project	-	-	18.75%	18.75%
Joint ventures of IRC						
Heilongjiang Jianlong	China	Vanadium project		_	14.31%	14.31%
Vanadium Industries Co.,	Offilia	variadidili project		_	17.5170	17.01/0
Limited						
LITTINGU						

⁽a) In the ordinary class of shares.(b) IRC Limited and its principal subsidiary and joint venture undertakings.

34. Related undertakings of the Group

The Group consists of the parent company, Petropavlovsk PLC, incorporated in the United Kingdom and its subsidiaries, associates and joint ventures. In accordance with Section 409 of the Companies Act 2006 a full list of related undertakings, the country of incorporation and the effective percentage of equity owned as at 31 December 2019 is disclosed below. The Group's principal subsidiaries and other significant investments are set out in note 33.

Subsidiaries Eponymouso Limited	Name of undertaking	Country of incorporation	Proportion of shares held by the Group ^(a)	Registered address
Victional Resources Limited	Subsidiaries		,	
Petropavlovsk Mining Treasury UK Limited Petropavlovsk Rouble Treasury Limited Petropavlovsk Pouble Treasury Limited Petropavlovsk Dallar Treasury Limited Petropavlovsk Dallar Treasury Limited Petropavlovsk Dallar Treasury Limited Petropavlovsk Dallar Treasury Limited Petropavlovsk 2010 Limited Petropavlovsk Dallar Treasury Limited Petropavlovsk Dallar Dal	Eponymousco Limited	UK	100%	11 Grosvenor Place, London, SW1X 7HH
Limited Petropaviox Rouble Treasury Limited Petropaviox Soulia Treasury Limited Petropaviox Soulia Treasury Limited Jersey 100% 13-14 Esplanade, St. Heller, JET 15E Petropaviox Sc. 2016 Limited Jersey 100% 13-14 Esplanade, St. Heller, JET 15E Petropaviox Sc. 2016 Limited Jersey 100% 13-14 Esplanade, St. Heller, JET 15E Petropaviox Sc. 2016 Limited Jersey 100% 13-14 Esplanade, St. Heller, JET 15E Petropaviox Sc. 2016 Limited Jersey 100% 13-14 Esplanade, St. Heller, JET 15E Petropaviox Sc. 2016 Limited Jersey 100% 13-14 Esplanade, St. Heller, JET 15E Petropaviox Sc. 2016 Limited 1407 L	Victoria Resources Limited	UK	100%	
Petropavlovsk Rouble Treasury Limited Petropavlovsk 2016 Limited Petropavlovsk 2016 Limited Jersey 100% Petropavlovsk 2016 Limited JSC Management Company Petropavlovsk 2016 Limited Petropavlovsk	Petropavlovsk Mining Treasury UK	UK	100%	11 Grosvenor Place, London, SW1X 7HH
Limited Petropavlovsk 2010 Limited Petropavlovsk 2016 Limited Jersey 100% 13-14 Esplanade, St. Heller, JE1 1EE Petropavlovsk 2016 Limited Jersey 100% 13-14 Esplanade, St. Heller, JE1 1EE JSC Management Company Russia 100% 675000, Amur Region, Biagoveshchensk, Lenina Street, 140/1 1				
Petropavlovsk 2016 Limited Jersey 100% 13-14 Esplanade, St. Heller, JE1 1EE Petropavlovsk 2016 Limited Jersey 100% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1			100%	11 Grosvenor Place, London, SW1X 7HH
Petropavlovsk 2016 Limited JSC Management Company Petropavlovsk Petropa				
JSC Management Company Petropaviovsk JSC Pokrovsky mine Russia JSC Pokrovsky mine Russia S9.38% Foreiton Magdagachinskiy District, Tygda Village, Soevetskaya Street, 17 Foreiton Magdagachinskiy District, Tygda Village, Soevetskaya Street, 17 Foreiton, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Albynskiy Rudnik Russia 100% Foreiton, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Osipkan Russia 100% Foreiton, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Tokurskiy Rudnik Russia 100% Foreiton, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Tokurskiy Rudnik Russia 100% Foreiton, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Tokurskiy Rudnik Russia 70% Foreiton, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC AGPK Russia 99.34% Foreiton, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC AGPK Russia 99.34% Foreiton, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Vostok Geologiya Russia 100% Foreiton, Khabarovsky Region, Rhabarovsk, Vladivostokskya Street, 22, build 3, office 1 LLC Asptroi Russia 100% Foreiton, Khabarovsk, Western Industrial Hub LLC NEG Regis Russia 99.34% Foreiton, Amur Region, Blagoveshchensk, Lenina Street, 140/1 Foreiton, Khabarovsk, Western Industrial Hub LLC Albyrektroi Russia 99.34% Foreiton, Amur Region, Blagoveshchensk, Lenina Street, 140/1 Foreiton, Khabarovsk, Western Industrial Hub LLC Albyrektroi Russia 99.34% Foreiton, Amur Region, Blagoveshchensk, Western Industrial Hub LLC RIC Gyrometallurgia Russia 99.38% Foreiton, Amur Region, Blagoveshchensk, Lenina Street, 140/1 Foreiton, Amur Region, Blagoveshche		•		
Petropavlovsky mine Russia S9.38% 676150, Amur Region, Magdagachinskiy District, Tygda JSC Pokrovsky mine Russia S9.94% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1		•		
JSC Pokrovsky mine Russia 99.38% 676150, Amur Region, Magdagachinsky District, Tygda Village, Sovetskaya Street, 17 LLC Albynsky Rudnik Russia 100% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Osipkan Russia 100% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Osipkan Russia 100% 676500, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Tokursky Rudnik Russia 100% 676501, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Tokursky Rudnik Russia 70% 676501, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC AGPK Russia 99.38% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC AGPK Russia 99.38% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Vostok Geologlya Russia 99.94% 680021, Khabarovsky Region, Khabarovsk, 140/1 LLC Vostok Geologlya LLC AND Region Russia 100% 675002, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Nostok Geologlya Russia 100% 675002, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC NG Regis Russia 100% 675002, Amur Region, Blagoveshchensk, Mestern Industrial Hub LLC NG Region, Rhabarovsk, Western Industrial Hub LLC RIC Gydromeallurgia Russia 99.38% 680041, Khabarovsky Region, Khabarovsk, Balashovskaya Street, 22 LLC RIC Gydromeallurgia Russia 99.38% 680041, Khabarovsky Region, Blagoveshchensk, Lenina Street, 15 LLC RIC Gydromeallurgia LLC RIC Gydromeallurgia Russia 100% 675002, Amur Region, Blagoveshchensk, Lenina Street, 160/1 LLC RIC Gydromeallurgia 100% 675002, Amur Region, Blagoveshchensk, Lenina Street, 160/1 Russia 100% 675002, Amur Region, Blagoveshchensk, Lenina Street, 160/1 LLC RIC Gydromeallurgia 100% 675002, Amur Region, Blagoveshchensk, Lenina Street, 160/1 LLC RIC Gydromeallurgia 100% 675002, Amur Region, Blagoveshchensk, Lenina Street, 160/1 Russia 100% 675002, Amur Region, Blagoveshchensk, Lenina Street, 160/1 LLC RIC Gydromeallurgia 100% 675002, Amur Region, Blagoveshchensk, Lenina Street, 160/1 Russia 100% 675002, Amur Region, B		Russia	100%	
LLC Malomirskiy Rudnik Russia 99.94% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Albynskiy Rudnik Russia 10% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Osipkan Russia 10% 676581, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Tokurskiy Rudnik Russia 10% 676581, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC TEMI Russia 10% 676581, Amur Region, Selemdzhinskiy District, Tokur Village, Vorozhejkina Street, 16 LLC TEMI Russia 99.38% 676000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Perspektiva DV Russia 99.38% 676000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Vostok Geologiya Russia 99.94% 680021, Khabarovskiy Region, Khabarovsk, Vladivostokskaya Street, 22, build, 3, office 11 LLC Vostok Geologiya Russia 10% 676581, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Vostok Geologiya Russia 10% 676580, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Vostok Geologiya Russia 10% 676500, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Vostok Geologiya Russia 10% 676500, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC NPGF Regis Russia 10% 676502, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC NPGF Regis Russia 10% 676502, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC NPGF Region, Rhabarovsk, Western Industrial Hub Street, 52/1 LLC NPGF Region, Rhabarovsk, Western Industrial Hub LLC NPGF Region, Rhabarovsk, Western Industrial Hub LLC NPGF Region, Rhabarovsk, Western Industrial Hub LLC NPGF Region, Rhabarovsk, Region, Rha		Dunnin	00.200/	
LLC Malomirskiy Rudnik Russia Russia	JSC FORIOVSKIY IIIIIle	Russia	99.30%	
LLC Albynskiy Rudnik Russia 100% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 14	LLC Malomirskiy Rudnik	Russia	99.94%	675000, Amur Region, Blagoveshchensk, Lenina Street,
LLC Osipkan Russia 100% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Tokurskiy Rudnik Russia 100% 675801, Amur Region, Selemdzhinskiy District, Tokur Village, Vorozhejkina Street, 16 G75801, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC AGPK Russia 99.38% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Perspektiva DV Russia 199.44% 680021, Khabarovskiy Region, Khabarovsk, Valadivostokskaya Street, 22, build 3, office 11 B80021, Khabarovskiy Region, Khabarovsk, Valadivostokskaya Street, 22, build 3, office 9 G75002, Amur Region, Blagoveshchensk, Pervomayskaya Street, 22, build 3, office 9 G75002, Amur Region, Blagoveshchensk, Western Industrial Hub LLC NPGF Regis Russia 100% 675002, Amur Region, Blagoveshchensk, Western Industrial Hub LLC NPGF Regis Russia 100% 675002, Amur Region, Blagoveshchensk, Western Industrial Hub LLC NPGF Regis Russia 100% 675002, Amur Region, Blagoveshchensk, Western Industrial Hub LLC AVIC Amur Region, Blagoveshchensk, Western Industrial Hub LLC AVIC Amur Russia 100% 675002, Amur Region, Blagoveshchensk, Western Industrial Hub LLC AVIC Amur Russia 100% 675002, Amur Region, Blagoveshchensk, Western Industrial Hub LLC AVIC Amur Russia 100% 675016, Amur Region, Blagoveshchensk, Kalinina Street, 140/1 LLC Transit Russia 100% 675016, Amur Region, Blagoveshchensk, Kalinina Street, 140/1 LLC Transit Russia 100% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Transit Russia 100% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Transit Russia 100% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Transit Russia 100% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Transit Russia 100% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Transit Russia 100% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Transit Russia 100% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Transit Russia 100% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Transit				
LLC Tokurskiy Rudnik Russia	, ,			140/1
LLC TEMI Russia 75% 675000, Amur Region, Blagoveshchensk, Lenina Street, 16 LLC AGPK Russia 99.38% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC AGPK Russia 99.94% 680021, Khabarovskiy Region, Khabarovsk, Lenina Street, 140/1 LLC Verspektiva DV Russia 99.94% 680021, Khabarovskiy Region, Khabarovsk, Vladivostokskaya Street, 22, build.3, office 11 LLC Vostok Geologiya Russia 99.94% 680021, Khabarovskiy Region, Khabarovsk, Vladivostokskaya Street, 22, build.3, office 11 LLC Kapstroi Russia 100% 675002, Amur Region, Blagoveshchensk, Pervomayskaya Street, 12, build.3, office 91 LLC NPGF Regis Russia 100% 675002, Amur Region, Blagoveshchensk, Western Industrial Hub CJSC ZRK Dalgeologiya Russia 99.85% 680041, Khabarovskiy Region, Khabarovsk, Balashovskaya Street, 12, build.3, office 91 LSC PHM Engineering Russia 99.85% 680041, Khabarovskiy Region, Khabarovsk, Balashovskaya Street, 12, build.3, office 91 LSC Ingriedmet Russia 99.65% 660025, Itvakus, Gagarina Boulevard, 38 LLC NIC Gydrometallurgia Russia 100% 196247, St. Petersburg, Leninskiy Prospekt, 151, level 6, office 635, 26, Leninskiy Prospekt, 151, level 6, offic	LLC Osipkan	Russia	100%	140/1
LLC AGPK LLC AGPK Russia 99.38% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 Russia 99.94% 680021, Khabarovskiy Region, Khabarovsk, Vladivostokskaya Street, 22, build.3, office 9 LLC Vostok Geologiya Russia 99.94% 680021, Khabarovskiy Region, Khabarovsk, Vladivostokskaya Street, 22, build.3, office 9 LLC Kapstroi Russia 100% 675002, Amur Region, Blagoveshchensk, Pervomayskaya Street, 22, build.3, office 9 LLC NPGF Regis Russia 100% 675027, Amur Region, Blagoveshchensk, Western Industrial Hub CJSC ZRK Dalgeologiya Russia 99.38% 680041, Khabarovskiy Region, Khabarovsk, Western Industrial Hub GBO041, Khabarovskiy Region, Khabarovsk, Balashovskaya Street, 26/1 Street, 15 LLC NIC Gydrometallurgia Russia 99.38% 680041, Khabarovskiy Region, Khabarovsk, Balashovskaya Street, 15 LLC NIC Gydrometallurgia Russia 99.69% 684025, Irkutsk, Gagarina Boulevard, 38 LLC NIC Gydrometallurgia LLC NIC Gydrometallurgia Russia 100% 675016, Amur Region, Blagoveshchensk, Kalinina Street, 137 LLC AVT-Amur Russia 100% 675016, Amur Region, Blagoveshchensk, Kalinina Street, 137 LLC AVT-Amur Russia 100% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 140/1 LLC Transit Russia 100% 105082, Moscow, Rubtsov Pereulok, 13 6870516, Amur Region, Blagoveshchensk, Lenina Street, 140/1 140/1 LLC Transit Russia 100% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 140/1 LLC Transit Pokrovskiy Mining College Russia 99.38% 676572, Amur Region, Blagoveshchensk, Lenina Street, 140/1 140/1 LLC Transit LLC Transit LLC AVT-Amur Russia 100%	LLC Tokurskiy Rudnik	Russia	100%	
LLC Perspektiva DV Russia 99.94% 680021, Khabarovskiy Region, Khabarovsk, Vladivostokskaya Street, 22, build.3, office 11 680021, Khabarovskiy Region, Khabarovsk, Vladivostokskaya Street, 22, build.3, office 11 680021, Khabarovskiy Region, Khabarovsk, Vladivostokskaya Street, 22, build.3, office 9 LLC Kapstroi Russia 100% 675002, Amur Region, Blagoveshchensk, Pervomayskaya Street, 62/1 LLC NPGF Regis Russia 99.38% 680041, Khabarovskiy Region, Khabarovsk, Western Industrial Hub CJSC ZRK Dalgeologiya Russia 99.38% 680041, Khabarovskiy Region, Khabarovsk, Balashovskaya Street, 62/1 Street, 15 St	LLC TEMI	Russia	75%	
LLC Perspektiva DV Russia 99.94% 680021, Khabarrovskiy Region, Khabarrovsk, Vladivostokskaya Street, 22, build.3, office 1 680021, Khabarrovskiy Region, Khabarrovsk, Vladivostokskaya Street, 22, build.3, office 9 675002, Mrun Region, Blagoveshchensk, Pervomayskaya Street, 62/1 LLC Kapstroi Russia 100% 675072, Amur Region, Blagoveshchensk, Pervomayskaya Street, 62/1 Hub CJSC ZRK Dalgeologiya Russia 99.38% 680021, Khabarrovskiy Region, Khabarrovsk, Vladivostokskaya Street, 62/1 Hub CJSC ZRK Dalgeologiya Russia 99.38% 680027, Amur Region, Blagoveshchensk, Western Industrial Hub SSC Irgiredmet Russia 99.38% 680025, Ikutsk, Gagarina Boulevard, 38 LLC NIC Gydrometallurgia Russia 100% 196247, St. Petersburg, Leninskiy Prospekt, 151, level 6, office 635, 26 LLC BMRP Russia 100% 675016, Amur Region, Blagoveshchensk, Kalinina Street, 137 LLC AVT-Amur Russia 49% 675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Transit Russia 100% 676572, Amur Region, Selemdzhinskiy District, Fevralsk Urban Village, Vysotskogo Street, 1 Pokrovskiy Mining College Russia 99.38% 676244, Amur Region, Selemdzhinskiy District, Fevralsk Urban Village, Vysotskogo Street, 1 Pokrovskiy Mining College Universai Mining Inc. Guyana 100% 1676244, Amur Region, Zeya, Zolotogorskoe Shosse, 6 Universai Mining Inc. Guyana 100% 14 Souliou Street, Aglantzia, Nicosia, 2102 Voltimand Limited Cyprus 100% 14 Souliou Street, Aglantzia, Nicosia, 2102 Sicinius Limited Cyprus 100% 14 Souliou Street, Aglantzia, Nicosia, 2102 Sicinius Limited Cyprus 100% 14 Souliou Street, Aglantzia, Nicosia, 2102 Syncrom High Corporation Ltd Cyprus 100% 14 Souliou Street, Aglantzia, Nicosia, 2102 Syncrom High Corporation Ltd Cyprus 100% 14 Souliou Street, Aglantzia, Nicosia, 2102 Syncrom High Corporation Ltd Cyprus 100% 14 Souliou Street, Aglantzia, Nicosia, 2102 Cliffon House, 75 Fort Street, PO Box 1350, Grand Cayman, KY1-1108	LLC AGPK	Russia	99.38%	
LLC Vostok Geologiya Russia	LLC Perspektiva DV	Russia	99.94%	
LLC Kapstroi Russia 100% 675002, Amur Region, Blagoveshchensk, Pervomayskaya Street, 62/1 LLC NPGF Regis Russia 100% 675027, Amur Region, Blagoveshchensk, Western Industrial Hub CJSC ZRK Dalgeologiya Russia 99,38% 680041, Khabarovskiy Region, Khabarovsk, Balashovskaya Street, 15 JSC PHM Engineering Russia 94% 150082, Moscow, Rubtsov Pereulok, 13 JSC Irgiredmet Russia 99,69% 664025, Irkutsk, Gagarina Boulevard, 38 LLC NIC Gydrometallurgia Russia 100% 196247, St. Petersburg, Leninskiy Prospekt, 151, level 6, office 635, 26 LLC BMRP Russia 100% 6750016, Amur Region, Blagoveshchensk, Kalinina Street, 137 LLC AVT-Amur Russia 100% 6755000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Transit Russia 99,38% 676244, Amur Region, Selemdzhinskiy District, Fevralsk Urban Village, Vysotskogo Street, 1 Pokrovskiy Mining College Russia 99,38% 676244, Amur Region, Zeya, Zolotogorskoe Shosse, 6 Universal Mining Inc. Guyana 100% Lot 8 Pere Street, Kitty, Georgetown Petropavlovsk (Cyprus) Limited Cyprus 100% 14 Souliou Street, Aglantzia, Nicosia, 2102 Malomyrskiy Rudnik (Cyprus) Ltd Cyprus 100% 14 Souliou Street, Aglantzia, Nicosia, 2102 Horatio Limited Cyprus 100% 14 Souliou Street, Aglantzia, Nicosia, 2102 Horatio Limited Cyprus 100% 14 Souliou Street, Aglantzia, Nicosia, 2102 Sicnius Limited Cyprus 100% 14 Souliou Street, Aglantzia, Nicosia, 2102 Sicnius Limited Cyprus 100% 14 Souliou Street, Aglantzia, Nicosia, 2102 Cayman Cayiron Limited Sicnius Limited Cyprus 100% 14 Souliou Street, Aglantzia, Nicosia, 2102 Ciffton House, 75 Fort Street, PO Box 1350, Grand Cayman, Cayiron Limited 61 Slands 100% KY1-1108	LLC Vostok Geologiya	Russia	99.94%	680021, Khabarovskiy Region, Khabarovsk,
LLC NPGF Regis Russia Russia P9.38% 680041, Khabarovskiy Region, Khabarovsk, Balashovskaya Street, 15 JSC PHM Engineering Russia JSC Irgiredmet Russia Russia P9.69% 664025, Irkutsk, Gagarina Boulevard, 38 LLC NIC Gydrometallurgia Russia Russia P9.69% 675016, Amur Region, Blagoveshchensk, Western Industrial Hub P0.675027, Amur Region, Khabarovskiy Region, Khabarovsk, Balashovskaya Street, 15 Russia P9.69% 664025, Irkutsk, Gagarina Boulevard, 38 LLC NIC Gydrometallurgia Russia P0.675016, Amur Region, Blagoveshchensk, Kalinina Street, 137 LLC AVT-Amur Russia Russia P0.675000, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LLC Transit Russia P0.676572, Amur Region, Blagoveshchensk, talinina Street, 140/1 LC AVT-Amur Russia P0.6765016, Amur Region, Blagoveshchensk, Lenina Street, 140/1 LC Transit Russia P0.676572, Amur Region, Blagoveshchensk, talinina Street, 140/1 LC AVT-Amur Russia P0.6765000, Amur Region, Selemdzhinskiy District, Fevralsk Urban Village, Vysotskogo Street, 1 Pokrovskiy Mining College Russia P0.38% R06244, Amur Region, Zeya, Zolotogorskoe Shosse, 6 Lot 8 Pere Street, Kitty, Georgetown Petropavlovsk (Cyprus) Limited Cyprus P0.676722, Amur Region, Selemdzhinskiy District, Fevralsk Urban Village, Vysotskogo Street, 1 P0.676572, Amur Region, Selemdzhinskiy District, Fevralsk Urban Village, Vysotskogo Street, 1 P0.676572, Amur Region, Selemdzhinskiy District, Fevralsk Urban Village, Vysotskogo Street, 1 P0.676572, Amur Region, Selemdzhinskiy District, Fevralsk Urban Village, Vysotskogo Street, 1 P0.676572, Amur Region, Selemdzhinskiy District, Fevralsk Urban Village, Vysotskogo Street, 1 P0.676572, Amur Region, Selemdzhinskiy District, Fevralsk Urban Village, Vysotskogo Street, 1 P0.676572, Amur Region, Selemdzhinskiy District, Fevralsk Urban Village, Vysotskogo Street, 1 P0.676572, Amur Region, Selemdzhinskiy District, Fevralsk Urban Village, Vysotskogo Street, 1 P0.676572, Amur Region, Selemdzhinskiy District, Fevralsk Urban Village, Vysotskogo S	LLC Kapstroi	Russia	100%	675002, Amur Region, Blagoveshchensk, Pervomayskaya
CJSC ZRK Dalgeologiya Russia JSC PHM Engineering Russia JSC Irgiredmet Russia LC NIC Gydrometallurgia Russia Russia Russia Po.699 Russia Po.6996 Russia Po.675016, Amur Region, Blagoveshchensk, Kalinina Street, 137 LLC BMRP Russia	LLC NPGF Regis	Russia	100%	675027, Amur Region, Blagoveshchensk, Western Industrial
JSC PHM Engineering JSC Irgiredmet Russia JSC Irgiredmet Russia LLC NIC Gydrometallurgia Russia LLC NIC Gydrometallurgia Russia Russia 100% Russia 100	CJSC ZRK Dalgeologiya	Russia	99.38%	680041, Khabarovskiy Region, Khabarovsk, Balashovskaya
JSC Irgiredmet LLC NIC Gydrometallurgia Russia Russ	JSC PHM Engineering	Russia	94%	
LLC BMRP Russia Russ			99.69%	
LLC BMRP Russia Russ		Russia	100%	196247, St. Petersburg, Leninskiy Prospekt, 151, level 6,
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LLC Olekminsky Rudnik Russia 31.10% 676253, Amur Region, Tyndinskiy District, Village Olekma				
LLC KS GOK Russia 31.10% 679000, The Jewish Autonomous Region, Birobidzhan, 60- Letiya SSSR Street, Building 22B				679000, The Jewish Autonomous Region, Birobidzhan, 60-

LLC Garinsky Mining & Metallurgical Complex Co	Name of undertaking	Country of incorporation	Proportion of shares	Registered address
LLC Garinsky Mining & Metallurgical Complex Co		·		
LLC Kostenginskiy GOK LLC Orlovsko-Sokhatinskiy Rudnik Russia 31.0% 675028, Amur Region, Blagoveshchensk, Ignatievskaya Road, 19 JSC Giproruda Russia 21.85% Russia 31.0% 628218, RF, Khabarovsk Territory, Town Sovetskaya Gavan, Pervormayskaya Street, 48A LLC Amursnab LLC Jamining Russia 31.0% 628218, RF, Khabarovsk Territory, Town Sovetskaya Gavan, Pervormayskaya Street, 48A LLC Gomiy Park LLC Gomiy Park Russia LLC Garinskaya Infrastructure Russia Russia 31.0% 675028, Amur Region, Blagoveshchensk, Ignatievskaya Road, 19 LLC Gomiy Park Russia 31.0% 675028, Amur Region, Blagoveshchensk, Ignatievskaya Road, 19 LLC Gomiy Park Russia LLC Gomiy Park Russia 31.0% 675028, Amur Region, Blagoveshchensk, Ignatievskaya Road, 19 LLC TOK Russia 31.0% 675028, Amur Region, Blagoveshchensk, Ignatievskaya Road, 19 LLC TOK Russia 31.0% 676282, Amur Region, Blagoveshchensk, Ignatievskaya Road, 19 Russian Titan Company Limited Cyprus 31.0% Cyprus 31.0% Cyprus 31.0% Souliou 14, Aglantzia, 2102 Nicosia Brasenose Services Limited Cyprus 31.0% Russian Cyprus 31.0% Souliou 14, Aglantzia, 2102 Nicosia Brasenose Services Limited Cyprus 31.0% Souliou 14, Aglantzia, 2102 Nicosia Brasenose Services Limited Cyprus 31.0% Souliou 14, Aglantzia, 2102 Nicosia Brasenose Services Limited Cyprus 31.0% Souliou 14, Aglantzia, 2102 Nicosia Rumier Holdings Limited Cyprus 31.0% Souliou 14, Aglantzia, 2102 Nicosia Rumier Holdings Limited Cyprus 31.0% Souliou 14, Aglantzia, 2102 Nicosia Rumier Holdings Limited Cyprus 31.0% Souliou 14, Aglantzia, 2102 Nicosia Rumier Holdings Limited Cyprus 31.0% Souliou 14, Aglantzia, 2102 Nicosia Rumier Holdings Limited Cyprus 31.0% Souliou 14, Aglantzia, 2102 Nicosia Rumier Holdings Limited Cyprus 31.0% Souliou 14, Aglantzia, 2102 Nicosia Rumier Holdings Limited Cyprus 31.0% Souliou 14, Aglantzia, 2102 Nicosia Rumier Holdings Limited Cyprus 31.0% Souliou 14, Aglantzia, 2102 Nicosia Rumier Holdings Limited Cyprus 31.0% So	, ,	Russia		
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⁽a) In the ordinary class of shares.(b) IRC Limited and its principal subsidiary and joint venture undertakings.

Review of Ore Reserves and Mineral Resources

In line with best industry practice, Petropavlovsk reports its Mineral Resources and Ore Reserves in accordance with the JORC Code. The Mineral Resource and Ore Reserve estimates are an update on independent estimates prepared by Wardell Armstrong International (WAI), a UK based independent technical consultancy firm, in April 2017. The updated estimates incorporate all material exploration completed in 2017, 2018 and 2019 as well as depletion due to mining activities. To reflect recent market trends, the Company has increased its long-term gold price assumption for Mineral Resource reporting from \$1,500/oz to \$1,700/oz. Similarly, the long-term gold price assumption for Ore Reserve reporting was changed from \$1,200/oz to \$1,400/oz.

As at 31 December 2019, total Group Mineral Resources (including Reserves) amounted to 21.03Moz of gold compared to 20.52Moz at end 2018, with total Reserves amounting to 8.46Moz compared to 8.21Moz at end 2018. The increase in Mineral Resources is due to a combination of exploration success at Pioneer and Malomir and a higher gold price assumption. In particular, the higher price assumption has enabled tailings stored at Pioneer and Pokrovskiy to be included as JORC Inferred Resources given their potential to be re-processed.

There was an overall decrease in Ore Reserves at Pioneer due to mining depletion and the use of more conservative recovery and cost assumptions with respect to estimating refractory gold ores. This was more than offset by an increase in Ore Reserves at Malomir and Albyn. The increase at Malomir resulted from an updated pit design and the inclusion of new discoveries with open pit mining potential at the Quartzitovoye area. An increase in Ore Reserves at Albyn resulted from successful in-fill drilling which converted Inferred resources into Ore Reserves at the Elginskoye deposit.

The tables below provide a summary of Group Mineral Resources and Ore Reserves. Detailed asset by asset Mineral Resource and Ore Reserve information can be found on the Company web site.

An independently audited estimate is expected to be published during Q3 2020.

Group Ore Reserves as at 31/12/2019 (in accordance with the JORC Code 2012 $^{(1)}$)

Total Open Pit and Underground Ore Reserves

	Category	Tonnage (kt)	Grade (g/t Au)	Metal (Moz)
Total	Proved	55,300	0.78	1.38
	Probable	223,316	0.99	7.08
	Proved+Probable	278,616	0.94	8.46
Non-Refractory	Proved	22,158	0.69	0.49
	Probable	57,964	1.06	1.98
	Proved+Probable	80,122	0.96	2.47
Refractory	Proved	33,141	0.84	0.89
	Probable	165,352	0.96	5.10
	Proved+Probable	198,494	0.94	5.99

Total Open Pit Ore Reserves

	Category	Tonnage (kt)	Grade (g/t Au)	Metal (Moz)
Total	Proved	55,103	0.75	1.34
	Probable	221,952	0.95	6.81
	Proved+Probable	277,055	0.91	8.14
Non-Refractory	Proved	21,961	0.63	0.45
	Probable	57,094	1.00	1.84
	Proved+Probable	79,055	0.90	2.28
Refractory	Proved	33,141	0.84	0.89
	Probable	164,858	0.94	4.97
	Proved+Probable	197,999	0.92	5.86

Total Underground Ore Reserves

	Category	Tonnage (kt)	Grade (g/t Au)	Metal (Moz)
Total	Proved	197	7.56	0.05
	Probable	1,364	6.25	0.27
	Proved+Probable	1,561	6.42	0.32
Non-Refractory	Proved	197	7.56	0.05
	Probable	870	5.08	0.14
	Proved+Probable	1,067	5.54	0.19
Refractory	Proved	-	-	-
	Probable	494	8.32	0.13
	Proved+Probable	494	8.32	0.13

Notes:

- (1) With an exception of Tokur, Group Ore Reserves statements are prepared internally as an update of the April 2017 WAI estimate. The Pioneer, Malomir and Albyn Reserves were prepared in April 2020 in accordance with JORC Code 2012; Tokur Reserves were prepared in 2010 by WAI in accordance with JORC Code 2004 and there have been no changes to the Tokur estimates since that date
- (2) Pioneer, Malomir and Albyn Ore Reserves for open pit extraction are estimated within economical pit shells using a US\$1,400/oz gold price assumption and applying other modifying factors based on the projected performance of these operating mines. Tokur Reserves have been based on a US\$1,000/oz gold price assumption, together with operating costs assumptions relevant at the time of the estimate
- (3) The Open Pit Reserves cut-off grade for reporting varies from 0.30 to 0.70g/t Au, depending on the asset and processing method
- (4) Underground Ore Reserves estimates use a mine design with decline access, trackless mining equipment and a sublevel open stope mining method with or without back fill
- (5) Reserve figures have been adjusted for anticipated dilution and mine recovery
- (6) The Underground Reserves cut-off grade for reporting is 1.5g/t Au
- (7) In accordance with JORC Code, all open pit and underground designs have been based on Measured and Indicated Resources; in addition to the Proved and Probable Reserves quoted above, the design captures the following Inferred Resource:
 - Pioneer: 61,006kt @ 0.30g/t (0.59Moz) of non-refractory and 7,647kt @ 0.67g/t (0.16Moz) of refractory
 - Malomir: 166kt @ 0.77g/t (0.004Moz) of non-refractory and 6,453kt @ 0.89g/t (0.18Moz) of refractory
 - Albyn 4,296 @ 1.01g/t (0.1Moz) of non-refractory and 55.7kt @ 1.25g/t (0.02Moz) of refractory
- (8) Figures may not add up due to rounding

Group Mineral Resources as at 31/12/2019 (in accordance with the JORC Code 2012 (1))

Total Open Pit and Underground Mineral Resources					
	Category	Tonnage (kt)	Grade (g/t Au)	Metal (Moz)	
Total	Measured	75,490	0.87	2.11	
	Indicated	464,138	0.86	12.76	
	Measured+Indicated	539,628	0.86	14.87	
	Inferred	293,575	0.65	6.16	
Non-Refractory	Measured	37,690	0.93	1.13	
	Indicated	143,853	0.95	4.38	
	Measured+Indicated	181,544	0.94	5.51	
	Inferred	134,738	0.58	2.53	
Refractory	Measured	37,800	0.81	0.98	
	Indicated	320,285	0.81	8.38	
	Measured+Indicated	358,084	0.81	9.37	
	Inferred	158,837	0.71	3.63	

Total Open Pit Mineral Resources

	Category	Tonnage (kt)	Grade (g/t Au)	Metal (Moz)
Total	Measured	73,979	0.80	1.90
	Indicated	457,788	0.82	12.05
	Measured+Indicated	531,767	0.82	13.95
	Inferred	285,832	0.60	5.54
Non-Refractory	Measured	36,179	0.79	0.92
	Indicated	138,685	0.87	3.86
	Measured+Indicated	174,864	0.85	4.78

	Inferred	127,593	0.48	1.97
Refractory	Measured	37,800	0.81	0.98
	Indicated	319,103	0.80	8.18
	Measured+Indicated	356,903	0.80	9.17
	Inferred	158,240	0.70	3.57

Total Underground Mineral Resources

	Category	Tonnage (kt)	Grade (g/t Au)	Metal (Moz)
Total	Measured	1,511	4.33	0.21
	Indicated	6,350	3.50	0.71
	Measured+Indicated	7,861	3.66	0.93
	Inferred	7,743	2.47	0.62
Non-Refractory	Measured	1,511	4.33	0.21
	Indicated	5,168	3.10	0.51
	Measured+Indicated	6,680	3.38	0.72
	Inferred	7,146	2.43	0.56
Refractory	Measured	-	-	-
	Indicated	1,181	5.27	0.20
	Measured+Indicated	1,181	5.27	0.20
	Inferred	598	2.98	0.06

Notes:

- (1) Mineral Resources include Ore Reserves
- (2) Mineral Resource estimates for Pokrovskiy, Pioneer, Malomir and Albyn were prepared internally by the Group in accordance with JORC Code 2012 as an update of the April 2017 statement audited by WAI; Mineral Resources for Tokur were reviewed by WAI in 2010 in accordance with JORC Code 2004 and there have been no changes to the Tokur estimates since that date
- (3) Open Pit Mineral Resources for Pokrovskiy, Pioneer, Malomir and Albyn are constrained by conceptual open-pit shells at a \$1,700/oz long term gold price; Tokur Mineral Resources have no open pit constraints
- (4) The cut-off grade for Mineral Resources for open pit mining varies from 0.25 to 0.50g/t depending on the type of mineralisation and proposed processing method
- (5) A cut-off grade of 1.5g/t is used to report Mineral Resources for potential underground mining at all sites with exception of Albyn where a 1.0g/t cut off was used
- (6) Mineral Resources are not Reserves until they have demonstrated economic viability based on a feasibility or pre-feasibility study
- (7) Grade represents estimated contained metal in the ground and has not been adjusted for metallurgical recovery
- (8) Figures may not add up due to rounding

Exploration Findings

Pioneer

Exploration at North East Bakhmut (NE Bakhmut) focused on payshoots 1 and 2, to investigate the possibility of higher-grade underground mineralisation as well as to support ongoing mining activities.

Highlights for the year included:

- Two drill holes intersected mineralisation 30m to 70m below the pit floor at NE Bakhmut 1, confirming mineralisation extends well below the current open pit, with significant intersections of 14.1m@1.17g/t (C-6334), 7.2m @ 3.77g/t (C-1083) and 5.3m @ 1.36g/t (C-1083)
- The technical team is currently evaluating the possibility of deepening the NE Bakhmut 1 pit
- Stope definition drilling and production grade control sampling completed at NE Bakhmut 2 resulted in underground resources increasing from c.127 to c.142koz

Deep drilling at the Nikolaevskaya zone resulted in the discovery of further downdip extensions of the orebody and an increase in the mineral resource potential for underground mining.

Deep in-fill drilling at the central section of the Andreevskaya zone hit a payshoot with the best intersection grading 58.23g/t over a thickness of 11.1m. Since this is an in-fill drill hole, it does not extend the Andreevskaya ore body but demonstrates the existence of extremely high-grade pockets of mineralisation which would not have been detected by 40x40m drill grid. Historically, the Andreevskaya open pit has produced approximately 25% more gold than expected due to this effect. As a result, the existing Andreevskaya underground resource and reserve estimates are likely to be conservative.

Albyn

Resource expansion drilling on the periphery of Elginskoye has extended known gold mineralisation in the south-west, south-east and north, resulting in a 23% increase in Reserves compared to the previous year.

Drilling at Sukholozhskiy, 500m west of the Albyn open pit, intersected high grade mineralisation, with the best intersection of 2.5m @ 12.3g/t.

Malomir

In-fill drilling at Quartzitovoye confirmed the presence of a bulk stockwork to the west of ore body 55. This was previously considered to be a target for underground mining linked to the Quartzitovoye underground mine. However, the stockwork appears to be an increasingly attractive target for an open pit mine that would replace the Quartzitovoye underground mine once depleted.

Drilling at Osipkan, a Tokur satellite located 130km away from Malomir, has identified two zones equivalent to Inferred under JORC resources, including 97koz (2.5Mt @ 1.23g/t) and 22koz (458kt @ 1.50g/t)

Other Projects

Early stage exploration at the Chogarskaya and Verkhne-Udskaya licences in the Khabarovsk region yielded some promising results, including grab samples from the Chogarskaya license returning grades of up to 22.1g/t. At the Verkhne-Udskaya license, the average grade for mineralised trench samples is c.1g/t, whilst grab samples taken from the areas not yet trenched have shown grades of up to 10g/t.

Preliminary metallurgical tests suggest gold mineralisation at Verkhne-Udskaya is non-refractory.

Post Year End Events

In February 2020, the Group acquired exploration assets at Mariinskiy, comprising two adjacent exploration licences with a total area of c.155km² located c.30km north-east of Malomir and c.50km west from Tokur. These licences cover an area where extensive historical alluvial mining has taken place over a strike length of c.18km.

Historical exploration work has identified at least 30 quartz veins with gold grades of up to 10g/t, as well as disseminated gold mineralisation with grades of up to 2.5g/t.

The Company's in-house exploration team believe that this asset has the potential to contain substantial gold resources, of a similar scale and nature to known ore bodies at Malomir, including its satellites.

Development

Pioneer flotation

Following the launch of the POX Hub, the Group has started construction of a 3.6Mtpa flotation at Pioneer plant which is expected to be operational from Q4 2020. The addition of a flotation plant will enable Pioneer's substantial refractory reserves to be processed by concentrating refractory ore at the mine prior to transporting concentrate to the POX Hub for further processing into doré.

The flotation plant will utilise two of the c.2.0Mt per annum crushing and grinding lines that are currently dedicated to the RIP circuit. Consequently, non-refractory processing capacity will be reduced to 2.7Mtpa from 6.7Mtpa. Given the harder nature of refractory ore, the combined annual throughput of refractory gold ores through the two milling lines is expected to be less than 4.0Mtpa at around 3.6Mtpa.

Elginskoye

In 2019, the Group commenced an extensive exploration program to in-fill existing drill grid and increase confidence in Ore Reserves scheduled for mining in the short and mid-term, as well as to expand known Mineral Resources along strike and down dip. As part of the exploration programme, a large number of cyanide tests were carried out to better define both refractory and non-refractory reserves.

In H2 2019, preparation work began ahead of full-scale mining at Elginskoye in H2 2020. As part of this work, a 30km long all-season road was constructed to connect Elginskoye with the processing facilities at Albyn. On-site mining infrastructure was created and waste stripping work commenced late 2019.

As at the end of Q1 2020, mining and preparation work remains on-schedule. The start of processing of Elginskoye ore will coincide with cessation of Albyn ore processing. Ore from Elginskoye will be transported by trucks to the existing Albyn RIP plant and therefore no capital investment is required to create a dedicated Elginskoye processing facility.

Q1 2020 Sales and Production Update

Gold sales

- 51% increase in total gold sales to 162.5koz (Q1 2019: 107.7koz), of which 60.9koz (37%) came from processing third-party refractory gold at the POX Hub
- Q1 2020 average realised gold price of \$1,570/oz (Q1 2019: \$1,278/oz); fully reflecting the market price of gold, following the expiry of outstanding gold hedging contracts at the end of December 2019

Sales by asset (koz)	Q1 2020	Q1 2019
JSC Pokrovskiy Mine	86.9	22.0
Pioneer	26.0	22.0
Third-party concentrate (POX Hub)	60.9	-
LLC Malomirskiy Rudnik (Malomir)	35.3	44.4
LLC Albynskiy Rudnik (Albyn)	40.3	41.4
Total Group	162.5	107.7

Numbers may not add up due to rounding

Pokrovskiy Pressure Oxidation (POX) Hub

- A total of 33.9koz of gold was produced from processing 35kt of Malomir refractory concentrates with stable recoveries averaging 91.5%
- A strong quarter for the processing of third-party concentrates, with 84.2koz of gold produced from 35kt of high-grade concentrate with recoveries averaging 94.2%

Q1 2020 Operations Report

JSC Pokrovskiy Mine

The JSC Pokrovskiy mine is a holder of a number of licences, including licences for the Pokrovskiy and Pioneer deposits. The Pokrovskiy deposit ceased operations in Q1 2018 with its site and processing facilities converted to host the new POX Hub, where concentrates from the Malomir flotation plant (which is reported as part of the Malomir production table) and third-party concentrates are processed.

Pokrovskiy	Units	Q1 2020	Q1 2019
POX Plant (3rd party concer			
Concentrate treated	t '000	35	-
Average grade	g/t	72.3	-
Gold in concentrate	oz. '000	81.3	-
Recovery	%	94.2	-
Gold recovered	oz. '000	76.5	-
Gold production (doré)	oz. '000	84.2	-

Note: numbers may not add up due to gold in circuit

The processing of third-party material was strong in the quarter with 35kt of high-grade material (72.3g/t) processed and recoveries averaging 94.2%, in-line with expectations.

Pioneer

Pioneer is currently focused on mining non-refractory ores from several conventional open pits and underground operations. The construction of a new flotation facility at Pioneer will lead to a transition in Q4 2020 from mining non-refractory to mainly refractory ores for processing at the POX Hub.

Pioneer	Units	Q1 2020	Q1 2019
Mining operations			
Total material moved	m3 '000	4,573	5,059
Ore mined	t '000	841	331
Average grade	g/t	0.94	0.95
Gold content	oz. '000	25.3	10.1
Processing operations (RIP	plant)		
Total milled	t '000	1,316	1,407
Average grade	g/t	0.78	0.60
Gold content	oz. '000	32.8	27.4
Recovery	%	87.3	81.3
Gold recovered	oz. '000	28.6	22.2
Gold production (doré)	oz. '000	26.4	21.9

Note: numbers may not add up due to gold in circuit

Open-pit mining produced mostly lower grade material which was blended with higher grade ores from the Katrin pit and high-grade underground ore prior to processing at the plant.

Stripping of refractory ore has been starting at Bakhmut, Yuzhnaya and Promezhutochnaya zones in accordance with schedule of commission of flotation lines at the Pioneer processing plant in 2H2020.

LLC Malomirskiy Rudnik

LLC Malomirskiy Rudnik is a holder of a licence for the Malomir deposit, a conventional open-pit and underground mining operation transitioning towards mainly refractory ore processing using the onsite flotation plant. The resulting concentrate is shipped for processing to the Pokrovskiy POX Hub. The Malomir deposit has extensive refractory reserves and resources and both near-mine and surrounding areas are considered highly prospective for the discovery of further refractory gold.

Malomir	Units	Q1 2020	Q1 2019
Mining Operations			
Total material moved	m3 '000	2,211	1,923
Non-refractory ore	t '000	84	96
Average grade	g/t	1.93	6.17
Gold content	oz. '000	5.2	19.0

Refractory ore	t '000	1,261	1,304
Average grade	g/t	1.12	0.84
Gold content	oz. '000	45.6	35.2
Processing operations (RIP)	olant)		
Total milled	t '000	101	168
Average grade	g/t	1.81	3.98
Gold content	oz. '000	5.9	21.5
Recovery	%	70.3	82.3
Gold recovered	oz. '000	4.1	17.7
Flotation Plant			
Ore	t '000	969	895
Grade	g/t	1.28	0.73
Gold content	oz. '000	40.0	21.1
Recovery	%	86.9	87.0
Yield	%	3.7	2.8
Concentrate produced	t '000	36	25
Grade	g/t	30.3	22.8
Gold content	oz. '000	34.7	18.3
POX Plant			
Concentrate treated	t '000	38	32
Grade	g/t	30.1	32.2
Gold in concentrate	oz. '000	37.1	33.1
Recovery	%	91.5	83.8
Gold recovered	oz. '000	33.9	27.7
Gold production (doré)	oz. '000	35.2	44.5

Note: numbers may not add up due to gold in circuit

Mining of non-refractory ore was affected by lower grades due to less proportion of high grade ore from underground mining compare with Q1 last year.

Mining of refractory ore continued according to plan as well as processing with strong flotation plant recoveries averaging 86.9%. Recoveries at the POX Hub averaged 91.5% for the quarter.

LLC Albynskiy Rudnik

LLC Albynskiy Rudnik is a holder of the licence for the Albyn deposit, the Group's principal non-refractory asset operating as a conventional open pit and RIP circuit. The mine life of the Albyn deposit is expected to cease in 2020. Thereafter, the Company intends to use Albyn's current processing facilities to treat ore from the Elginskoye and Unglichikanskoye as well as potentially from smaller deposits located nearby. These deposits, under the Company's control, contain JORC Measured, Indicated and Inferred Mineral Resources of 3.93Moz Au, including 2.32Moz of JORC Proved and Probable Ore Reserves. During 2020, the Elginskoye pit will be developed to replace the Albyn pit as the main source of ore from 2020. Road construction between Elginskoye and the Albyn processing plant was finalised in August 2019.

Albyn	Units	Q1 2020	Q1 2019
Mining Operations			
Total material moved	m3 '000	3,353	3,223
Ore mined	t '000	1,293	1,056
Average grade	g/t	1.06	1.24
Gold content	oz. '000	43.9	42.1
Processing operations (RIP Plant)			
Total milled	t '000	1,152	1,137

Average grade	g/t	1.16	1.15
Gold content	oz. '000	42.9	41.9
Recovery	%	94	93.7
Gold recovered	oz. '000	40.3	39.3
Gold production (doré)	oz. '000	40.4	41.3

Note: numbers may not add up due to gold in circuit

Albyn performed in line with expectations, with tonnes and grades mined from the Albyn main ore body as well as processing with solid recovery ratio of 94%.

Q1 2020 Exploration

In Q1 2020, the Company continued exploration with the objective of increasing Mineral Resources at the Pioneer, Albyn and Tokur projects.

Highlights

- Encouraging results at the Kera prospect (previously Ulgen), near Albyn, where grades of up to 32g/t were identified
- Kera maiden resources estimated at c.170koz, at an average grade of 2.98g/t (low confidence resources in accordance with Russian classification system)
- Exploration at Elginskoye expected to add up to 300koz to resources
- Extensions of gold mineralised zones were intersected at Alexandra (Pioneer) and Osipkan (Tokur satellite)

Pioneer

Eight holes were drilled on down dip extensions of the Alexandra zone. All eight intersected gold mineralisation with grades of between 0.6 - 0.8g/t and thicknesses of between 9 - 60m. Based on these results, the Company is evaluating the possibility of extending the Alexandra pit at depth, increasing non-refractory reserves.

Albyn

Exploration was carried out at the Kera prospect (previously named Ulgen) and at Elginskoye. Trenching, pre-strip and drilling intersected further potentially economic mineralisation. In the pre-strip, where 12 lines of channel samples were completed, a mineralised zone with average apparent thickness of 3m at an average grade of 3.28g/t was identified, with the best assay having a grade of 3.2g/t.

Five holes were drilled with a total length of 687m which intersected gold mineralisation 40 to 80m below surface. The best drill intersections included 7.4m @ 4.06g/t and 0.6m @ 16.2g/t.

Based on drilling and trenching completed to date, a maiden resource estimate was prepared for the Kera prospect in accordance with the Russian resource classification system. The P_1 category resource, which is a broad equivalent of JORC *Inferred* category, is estimated as c.170koz of gold with an average grade of 2.98g/t. This estimate only covers a small section of known Kera mineralisation. The Group's geologists believe that Kera has the potential to become a 1 - 2Moz open pit reserve, capable of supporting future Albyn production.

Drilling at Elginskoye focused on in-filling drilling in the central part of the ore body and on extending resources towards the south-east. A total of 8,897m of drilling was completed during Q1 2020. This work is yet to be incorporated into the Elginskoye JORC resource model. However, an indicative estimate suggests up to 300koz could be added to existing JORC Mineral Resources.

Tokur

Some 2,390m of drilling and 24,864m³ of trenching was completed at the Osipkan prospect, near Tokur. This work targeted north-west extensions of known Osipkan mineralised zones, yielding promising results. The best trench intersections included 7.0m @ 1.32g/t, 5.8m @ 0.88g/t and 1.0m @ 3.78g/t.

Selected drill hole intersections included 7.1m @ 2.53g/t, 3.0m@1.40g/t, 6.3m @ 2.17g/t and 4.8m @ 1.00g/t. Osipkan remains a promising non-refractory prospective satellite to Tokur.