铁货 IRC

IRC Limited

HONG KONG STOCK CODE: 1029

ANNUAL REPORT 2019

ABOUT US

IRC is the largest iron ore mining operator in the Russian Far East. Our world-class operations focus on producing high-quality iron ore concentrates, with long-term relationships with customers in China and Russia.

WHY IRC

IRC is unique in the iron ore market due to its competitive advantages, namely superior geology and direct access to China, the world's largest iron ore market, through established world-class infrastructure.

2020 AND BEYOND

K&S mine, our 3.2 million tonnes per annum project, has started commercial production and will soon reach full capacity. The mine produces 65% iron ore concentrates at some of the most competitive cost levels in the industry. In long term, we will have optionalities of doubling the production capacity of the Group and beyond by developing K&S Phase II and other exploration projects.

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KEY HIGHLIGHTS FOR FY2019

GROUP

PROFITABILITY AND CASHFLOW

Revenue (before hedging): US$**200.5** million

▲ 30.9%

Underlying EBITDA (excl. FX): US$**33.3** million

▲ 39.2%

Net cash generated from operations: US$**32.4** million

▲ 12.1%

OPERATIONS

Iron ore sales: **2.5** million tonnes

▲ 10.8%

Iron ore production: **2.6** million tonnes

▲ 15.3%

ENVIRONMENTAL & SOCIAL RESPONSIBILITIES

LTIFR: **1.04** (Below industry average)

▲ N/A

Green house gas emission: **69.4** thousand tonnes (% increase lower than production)

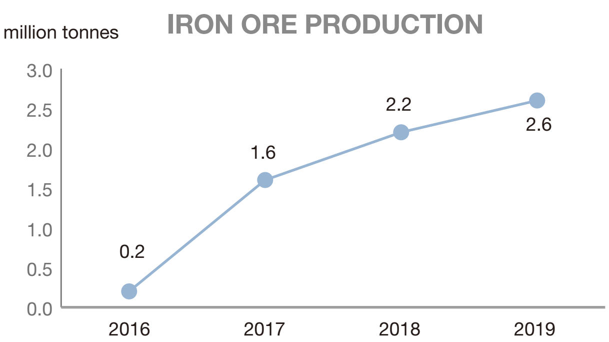
▲ 11.1%

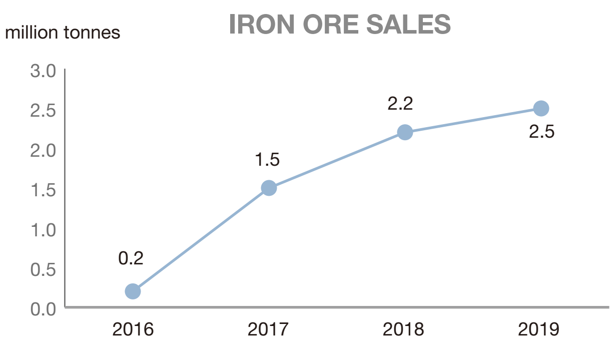
CASH COST PER TONNE US$51

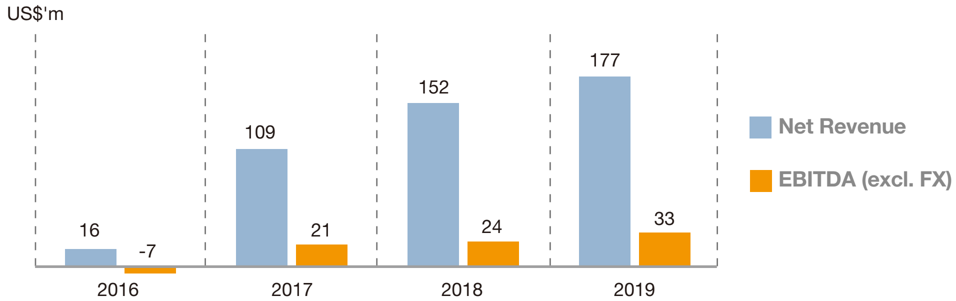
▲ 2.4%

ACHIEVED SELLING PRICE BEFORE HEDGING (PER DMT) US$87

▲ 17.6%







BALANCE SHEET

Borrowings – due within 1 year: US$**20.7** million

▼ 81.5%

Gross borrowings: US$**224.6** million

▲ 0.4%

Net asset value per share: HK$**0.31**

▼ 11.4%

* All production volume, sales volume and cash cost figures on this page refer to wet metric tonnes unless specified

CHAIRMAN'S STATEMENT

"It is wonderful to be able to report that IRC achieved record-highs in both production and sales volumes since the Company started, thanks to the dedication of the operating team at K&S."

Dear Shareholders and Stakeholders,

This is my first full year as chairman of our Company and it is wonderful to be able to report that IRC achieved record-highs in both production and sales volumes since the Company started. This was achieved, as much as anything, thanks to the dedication of the operating team at K&S.

Yet again, 2019 was a year of development for IRC and it has delivered solid operating and financial results against a challenging economic backdrop. Among our industry peers, IRC may not be one of the largest iron ore producers in its marketplace; but we always strive to consolidate our foothold thereon and to endeavour to make progress. We were able to react in a timely fashion to the rapidly changing environment and thus to position ourselves to be sustainable in the dynamic world of business.

FINANCIAL PERFORMANCE IN 2019

We saw improvements in both operational and financial performances in 2019 and, as we move ahead, our operating assets will continue to mature and, thus, optimise their levels of performance.

During the year, K&S enhanced its production capabilities in a successful ramp-up programme, in which the plant achieved an annual production record by operating at an average capacity of 81% to produce 2.6 million tonnes of iron ore, 15.3% higher than that of 2018. As part of this, K&S attained a significant milestone by successfully operating at full capacity in the month of October 2019. This encouraging performance was achieved despite disruptions in August, when production was affected by exceptionally heavy rain; and in November, when the ball mills experienced certain technical issues, which were rectified in December.

The positive operational performance translated to improved financial results, where our revenue increased by 16.9% to US$177.2 million and cash cost of US$51 per tonne remained comparable to that of last year, despite increased scale of operation. As a result, the Group's EBITDA (excluding foreign exchange), which is a more accurate indicator of its underlying performance, improved by 39.2% to US$33.3 million. This figure could have been as high as US$56.6 million were it not for the fact that we hedged our selling price in a backwardation market for risk management purposes to secure a healthy level of cashflow stream.

However, the EBITDA figure, when translated to the bottom line, is distorted by a number of non-operating items, such as the accounting adjustment to write off the unamortised loan costs of US$11.5 million associated with the ICBC loan refinancing and a foreign exchange loss of US$6.2 million, to produce a post tax loss of US$38.7 million.

We continue to maximise production from our world class assets and evaluate options for growth and expansion.

CONSTRAINED SUPPLY WITH STABLE PRICE

The iron ore market has seen some positive movements in 2019. The unfortunate Vale dam accident cut capacity off the market, raising concerns over supply tightness. With the supply disruptions, the 65% iron ore price soared to as high as US$136 per tonne. Later in the year, we saw a return of some supply capacities and this, coupled with a recovery in the Chinese iron port stocks, resulted in the iron ore price experiencing a healthy adjustment to close the year at US$104 per tonne, US$17 per tonne higher than the 2018 year end price level.

Currently, the 65% iron ore price is hovering in the US$100 per tonne region, and it is hopeful that the price will recover when the coronavirus pandemic subsides.

We remain confident in our own competitiveness and the strong fundamentals of the Chinese market in the long run. It is expected that the Belt and Road infrastructure plan will drive growth and steel demand for decades to come. Our longstanding customers and stakeholder partnerships in China are crucial ingredients for the success of IRC.

COST ADVANTAGE – AMUR RIVER BRIDGE

Transportation costs represent a significant portion of the cost structure of IRC and efficient and effective logistics is one of the critical successful factors for most of the mining companies. K&S is fortunate to have an inherent geographical advantage, given that the transportation distance from the mine site to the Chinese border of Suifenhe is merely c.1,000 kilometres. An icing on the cake is the Amur River Bridge. Due to be operational soon, the Bridge will shorten the distance between K&S and our customers in Northern China to c.240 kilometres, reducing transportation cost by up to US$5 per tonne. Apart from shortening the shipment time, logistical efficiency will also be improved as the turnaround time needed for wagons will be vastly reduced. K&S is expected to benefit from the improvement of the transport accessibility of the region, turning its strategic location into a competitive advantage.

"Responsible mining has always been a core issue of our business."

SUSTAINABLE AND RESPONSIBLE OPERATIONS

Respect for the environment is deeply rooted in our philosophy and actions; from mine and land restoration planning to local community engagements. We apply our best effort to ensure that our operations will minimise detriment to the environment and local communities.

K&S has been in commercial production for over 3 years now and we continue to enjoy strong support from the local government as well as regulatory and regional authorities. We are committed to being a responsible corporate citizen and to leaving our host communities a healthy and sustainable legacy. One of our top priorities in our agenda is the safety and well-being of our staff and the community. In 2019, I am pleased to report zero operational fatality and a LTIFR index of 1.04, a credit to our team in K&S.

Our people are our greatest asset and we are committed to raising our safety standards further during the coming years. While the presence of the K&S mine is positive to the local communities, we are aware of the risks to staff and the surrounding community associated with mining operations, and therefore we proactively manage those risks. We are working closely with the community and redoubling our efforts to build a more secure environment. Responsible mining has always been a core issue of our business.

BOARD CHANGES

As your Chairman, I have a leadership role in ensuring that we have an effective Board to protect and enhance shareholders' interests.

We are delighted to welcome Martin Davison joining our Board. Martin is a valuable addition bringing with him a variety of experience and new insights to our Board. On the other hand, Danila Kotlyarov has stepped down as an Executive Director and the Chief Financial Officer to accept an invitation from Petropavlovsk to be their Chief Financial Officer. We wish him well and are grateful that he remains a non-executive director of IRC. After serving the Board for almost 10 years, Simon Murray, *CBE, Chevalier de la Légion d'Honneur* has retired as an independent non-executive director. Having reached the venerable age of 80 years, not unreasonably, he wishes to reduce his business commitments. As Chairman, I shall miss his wise counsel and pragmatic approach to business matters and the Board is grateful for all that he has done for the Company.

As part of an ongoing review by the Company's Nomination Committee, there were changes to Patrick Cheng's work arrangements and Patrick has retired as a non-executive director of the Company but will remain as a consultant of IRC. I would like to express my sincere gratitude to Patrick for his valuable contributions to the Company. Danila's move to Petropavlovsk is understandable from his point of view and we wish him well in his new role. I am glad, though, that we have not lost him completely. Following this change, Johnny Yuen, who joined IRC ten years ago and assisted in the IPO of the Company, is taking on an increased role in the finance function of the Company and I look forward to working with him closely in the coming years.

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OUTLOOK

Throughout 2019, we met with many of our shareholders and stakeholders to explain the key focus areas of IRC: increasing productivity, better cost control, and enhancing corporate governance. These initiatives are essential in creating value for our shareholders.

2019 was a year of political turmoil with instability triggered by the US-China trade war, as well as the global economic slowdown. The beginning of 2020 is shaping up to be even more dramatic, with the post Brexit issues and the presidential election of US later in the year. A recent unexpected event – the COVID-19 outbreak – also poses significant impacts on the Chinese and global markets. The World Bank estimates that the world economy will expand by only 2.5%, while the GDP growth rate for China is expected to be less than 6% in 2020. These forecasts are likely to be subject to further downward adjustments as the coronavirus takes its toll across the globe.

The short-term market outlook is challenging but we are seeing some signs of optimisms. IRC's performance is subject to three main variables: – production capacity, iron ore price, and the Russian Rouble exchange rate. Currently, K&S is operating at a high production rate of c.95% and the 65% iron ore price remains at a healthy level of about US$100 per tonne despite the impacts from COVID-19. More importantly, the Russian Rouble has depreciated markedly in March 2020 and we are looking at hedging the currency to lock-in the weak exchange rate to reduce our cost level. There is, however, no guarantee that these parameters will continue to work in our favour, and your Board will continue to adopt a cautious approach in managing risks.

As K&S continues to increase its capacity, we are well placed to meet the market demand for iron ore concentrate. I am confident that IRC, led by Yury Makarov and his management team, will continue to deliver shareholder value and returns.

Last but not least, I would like to take this opportunity to thank all the management and on-the-ground staff for their loyal support that has helped us achieve as much as we have. These achievements would not be attained without the efforts of the management team and the unwavering commitment of our staff.

Thank you for your continued support of IRC.

Peter Hambro
Chairman of IRC

CEO AND CFO STATEMENT & RESULTS OF OPERATIONS

“EBITDA excluding foreign exchange improved by 39.2% to US$33.3 million”

Dear Shareholders and Stakeholders,

2019 was a challenging year in which the commodity market faced various economic and political uncertainties. Through these uncertainties, we have remained steadfast in our commitment to enhance the revenue generating ability of our assets to create shareholder’s value. IRC has been delivering a consistent track record of sustainable growth through the operation of K&S to improve the financial position of the Group.

K&S celebrated a significant milestone by operating at full capacity in the month of October. For the full year 2019, the mine increased its production rate to 81% of its designed capacity, 11% higher than that of last year, to produce 2.6 million tonnes of 65% iron ore concentrate. K&S achieved these satisfactory results despite a number of production interruptions during this turbulent year, such as third-party locomotive malfunctioning, design issue in the feeder’s gearbox, issues with the ball mills and the Drying Unit, and exceptionally poor weather in August. Although the K&S site team managed to swiftly mitigate or resolve these issues, they inevitably hampered our momentum in the ramping up program. Fortunately, these production issues, which are mostly out of our control, are not expected to recur. The ramping up of K&S’s production will continue in 2020 to provide greater contribution to IRC.

It is pleasing that the good production rate came at a time when the iron ore market was resilient with a stable pricing environment. The 65% iron ore Platts Index started the year at US$87 per tonne and rose to US$136 per tonne on the back of the Vale supply disruptions and strong demand from China before settling at around US$100 per tonne at the year end. The average Index price for 2019 was about US$104 per tonne, up from US$90 per tonne in 2018. In 2019, the average price premium for the 65% iron ore over the 62% iron ore amounted to US$11 per tonne and the forward curves of iron ore prices suggest that the price premium will increase further in 2020.

With higher production rate and stronger price, IRC’s turnover continued to grow in 2019 and amounted to US$177.2 million, representing an increase of US$25.6 million over 2018. As always, we remain cautious in cost control. Aided by the weak but stable Russian Rouble exchange rates, cash cost per tonne increased by 2.4%, which is lower than the Russian general inflation rate of 3.1% in 2019. Further saving is expected when the Amur River Bridge is operational. Thanks to the higher revenue and the group-wide cost control measures, EBITDA excluding foreign exchange improved by 39.2% to US$33.3 million.

While enjoying the growth in EBITDA, we remain vigilant and are keen to manage and reduce risk whenever possible. The earnings of resources companies like IRC are generally less predictable by nature given that they are mostly driven by the commodity price, which they usually have little control over. To address this issue, as part of the ongoing hedging program for risk management purposes, IRC entered into various hedging contracts to reduce the risks of adverse iron ore price movements. Our strategy was to hedge no more than half of K&S’s production with the remaining volume left unhedged. The hedging instruments, mostly in the form of protective collars, protected IRC from any significant reduction in iron ore price. However, hedging is, by nature, a double-edged sword. While it offers price protections, certain upside of the market price increase is forfeited. In 2019, our net achieved selling price was US$77 per dry metric tonne, 5.5% higher than the 2018

"Safety and sustainable development continue to be high on our agenda."

level. Were it not for hedging, our selling price would have been US$10 per tonne higher of US$87 per dry metric tonne, and our bottom line would have improved by about US$23 million. That being said, our hedging is not speculative in nature and is entered into with a view to secure reasonable levels of profit and cashflow, which are particularly important for a single-product company like IRC. A majority of the hedging contracts were entered into in the earlier part of 2019, before the surge in iron ore price due to the Vale incident. Most of these contracts have matured and have been settled in 2019. The rest were entered into at higher pricing levels to provide stronger price protections, and should give rise to lower level of hedging losses, if any, despite the current stable iron ore price environment.

At present, the Board of IRC has decided not to engage in further iron ore hedging while the market remains in backwardation.

On the corporate level, one of the key highlights of 2019 is the receipt of US$240 million from the Gazprombank to refinance the ICBC loan. Although being more expensive than the ICBC loan, the Gazprombank facility offers a repayment schedule which better aligns with the timing of the production ramp up at K&S, thereby taking weights off our shoulders from cashflow perspective. However, the refinancing necessitated an accounting adjustment to fully write off the unamortised loan costs of the ICBC facility of US$11.5 million. This expense item has a significant impact to our 2019 bottom line, but will not recur going forward.

Without taking into account the one-off items and foreign exchange, the underlying loss for 2019 of US$21.0 million remains comparable to that of 2018, despite higher depreciation following the write back of asset provisions made earlier and increased financing charges. We closed the year with a healthy balance sheet with a net assets value of US$278 million, equivalent to HK$0.31 per share.

Safety and sustainable development continue to be high on our agenda. Much of our efforts are focused on the development and well-being of our staff. We endeavour to be responsible to the environment, as significant efforts have been made and continue to be made in areas such as energy efficiency, water consumption and waste management.

Looking into the future, we are committed to ensuring that IRC continues to adhere and prosper in a sustainable manner. Despite challenges to our business coming from the economic and political uncertainties, we believe that the actions we have taken over the years will result in attractive long-term growth and development for our Company. In the volatile economic circumstances that we regularly encounter in today's environment, this long term commitment would enable us to ride out the storm. We have made progress in strengthening our balance sheet and, while that focus will continue, we constantly evaluate opportunities that will drive long-term growth and improve future returns.

Last but not least, we would like to thank our Board members for their support and guidance and all of our colleagues for their hard work and commitment. We are proud of their achievements and we look forward to working and developing together with our great team for years to come.

Yury Makarov	**Danila Kotlyarov**
Chief Executive Officer	*Chief Financial Officer*

The table below shows the results of the Group for the year ended 31 December 2019 and 2018:

	For the year ended 31 December		
	2019	2018	Variance
Key Operating Data			
Iron Ore Concentrate			
— Production volume (tonnes)	**2,576,325**	2,234,517	15.3%
— Sales volume (tonnes)	**2,464,401**	2,223,945	10.8%
Achieved Selling Price (US$/tonne)			
— based on wet metric tonne	**71**	68	4.4%
— based on dry metric tonne	**77**	73	5.5%
— based on dry metric tonne before hedging	**87**	74	17.6%
Cash Cost (US$/tonne)	**51.4**	50.2	2.4%
Consolidated Income Statement (US$'000)			
Revenue before hedging losses	**200,460**	153,134	30.9%
Hedging losses	**(23,296)**	(1,585)	>100%
Net Revenue	**177,164**	151,549	16.9%
Site operating expenses and service costs before depreciation and amortisation	**(135,126)**	(119,454)	13.1%
General administration expenses before depreciation and amortisation	**(10,667)**	(10,426)	2.3%
Other income, gains and losses	**1,931**	2,258	(14.5%)
EBITDA excluding foreign exchange	**33,302**	23,927	39.2%
Depreciation and amortisation	**(28,504)**	(21,208)	34.4%
Other financial costs	**(28,956)**	(21,679)	33.6%
Income tax credit/(expense) & non-controlling interests	**3,158**	(100)	N/A
Underlying loss – excluding non-recurring items and foreign exchange	**(21,000)**	(19,060)	10.2%
Reversal of impairment losses	**–**	90,483	N/A
Finance expense on early repayment of bank loan	**(11,465)**	–	N/A
Net foreign exchange (losses)/gains	**(6,181)**	4,553	N/A
Allowance for financial assets measured at amortised cost	**(23)**	(7,741)	(99.7%)
(Loss)/Profit for the year after taxation	**(38,669)**	68,235	N/A
Underlying Results (US$'000)			
EBITDA			
— Mine in production	**44,120**	35,160	25.5%
— Group (excluding foreign exchange)	**33,302**	23,927	39.2%
— Group	**27,121**	28,480	(4.8%)
Loss for the year attributable to owners of the Company			
— excluding non-recurring items and foreign exchange	**(21,000)**	(19,060)	10.2%

THE UNDERLYING RESULTS OF THE GROUP

IRC's operating results are mainly derived from the operation of K&S. The Group manages its operations with principal reference to the underlying operating cash flows and recurring earnings. The "EBITDA" and the "Underlying results excluding non-recurring items and foreign exchange" are the key performance indicators for IRC.

EBITDA

K&S reported a positive year in 2019 with sales volume increasing by 10.8% over the previous year. This translated to a 30.9% increase in the Group's revenue before hedging losses, from US$153.1 million to US$200.5 million.

IRC's 2019 revenue was, however, affected by a higher hedging losses. Hedging was entered into to manage the downside risks of iron ore price movements and was not speculative in nature. In 2019, hedging reduced IRC's revenue, and therefore its profitability, by US$23.3 million (2018: US$1.6 million). The net revenue for 2019, after taking into account the effect of hedging, was US$177.2 million, 16.9% higher than that of 2018. Currently, IRC has decided not to engage in further iron ore hedging while the market remains in backwardation.

With higher sales revenue and tight cost control, the Group's EBITDA excluding foreign exchange increased by 39.2%.

	For the year ended 31 December		
US$'000	**2019**	2018	Variance
EBITDA excluding foreign exchange	**33,302**	23,927	39.2%

Underlying Results – Excluding Non-Recurring Items and Foreign Exchange

While the improvement in the operation of K&S results in higher EBITDA, this positive financial performance was offset by the increase of the following expenses:

- Higher depreciation charge of US$7.3 million, mainly resulting from the reversal of asset impairments at the end of 2018; and

- Higher financial expenses of US$7.3 million mainly due to the higher interest rates of the loan from Gazprombank and higher loan guarantee fee.

The underlying result of the Group remained comparable to that of 2018, mainly due to the increase in depreciation and financial expenses offsetting the higher EBITDA.

	For the year ended 31 December		
US$'000	**2019**	2018	Variance
Underlying loss excluding non-recurring items and foreign exchange	**(21,000)**	(19,060)	10.2%

The Group's income statement includes certain material non-cash items which are non-recurring in nature and should be considered separately.

In 2019, the Group had an unamortised borrowing cost of US$11.5 million relating to the ICBC loan which was to be amortised over the repayment period. As the Group has refinanced the ICBC loan facility in 2019, this necessitated an accounting adjustment to fully write off this unamortised cost in the income statement in 2019, instead of amortising the cost over the remaining term of the loan. The write off does not have any cash impact on the Group. The Group's 2019 result was also affected by foreign exchange movements. The bridging loan from Petropavlovsk as well as the accruals and payables of the Group were mostly denominated in Russian Rouble and the appreciation of Rouble gave rise to foreign exchange losses. In 2019, IRC reported a foreign exchange loss of US$6.2 million while a gain of US$4.6 million was recorded in the same period last year. This US$10.7 million swing in foreign exchange, which is not within the control of IRC, plays a significant part to the profitability of the Group.

In 2018, a reversal of asset impairment in relation to the K&S mine of US$90.5 million was made, none for 2019. In addition, the Group had a net receivable from General Nice and, due to a winding up order being made by the High Court of Hong Kong against General Nice, a one-off, non-cash provision of about US$7.7 million has been charged.

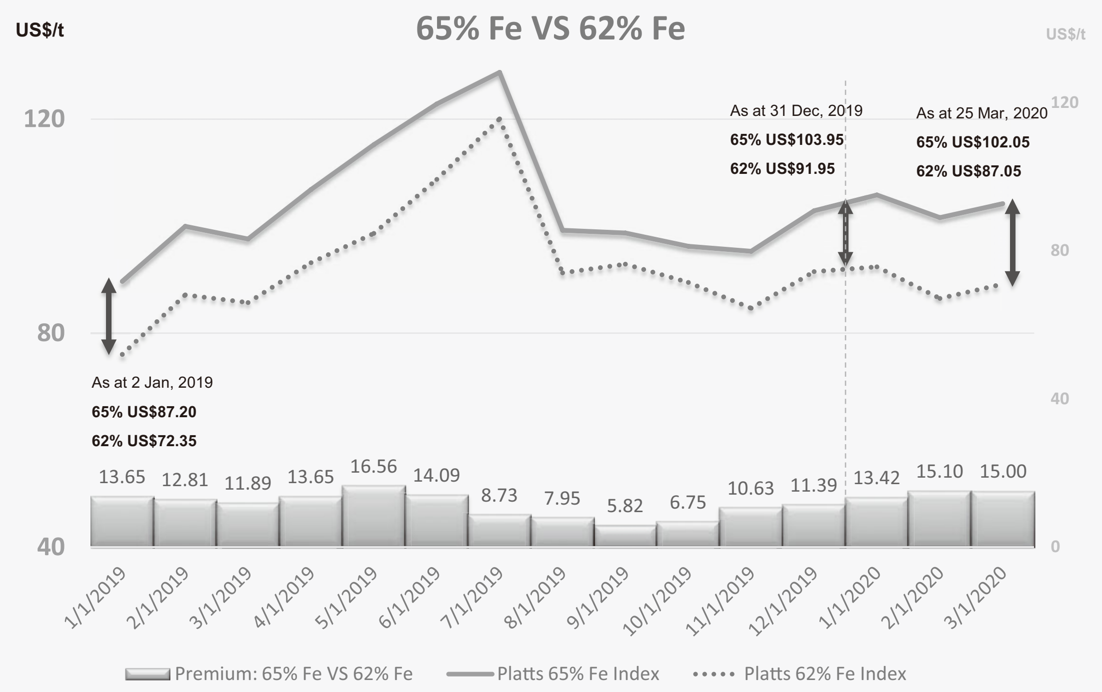
After taking into account the above non-recurring items and foreign exchange, IRC reported a loss of US$38.7 million in 2019 (2018: profit of US$68.2 million).

REVENUE

Iron ore concentrate

IRC's main revenue source comes from the sales of iron ore concentrates produced by the K&S mine. Production and sales volumes of K&S continue to increase since its commercial production in 2017. During 2019, the iron ore market demonstrated a good momentum with limited supply due to unfortunate incident at Vale in early 2019 and the strong demand for iron ore in China, particularly for the high-grade iron ore. The price of iron ore stayed at relatively high levels and generally performed better than market expectations. The price premium for 65% iron ore over the 62% iron ore is also widening.

65% Fe Price Premium Over 62% Fe



Sales of iron ore concentrates from K&S increased by 10.8% to 2,464,401 tonnes when comparing to the same period last year. On the basis of dry metric tonne, the selling price increased by 5.5% to US$77 per tonne. With better sales volume and higher achieved selling prices, revenue from K&S in 2019 amounted to US$175.8 million, representing an increase of 16.4% over the same period last year. This was accomplished after the effect of hedging is taken into account. IRC entered into various hedging arrangements during the reporting period to reduce the risks associated with adverse price movements. If the effect of hedging is excluded, the achieved selling price on a dry metric tonne basis would be US$87 per tonne. Under the accounting policy of IRC, the outstanding hedging instruments are subject to fair valuation adjustments with the gains or losses being reflected in reserve. As of 31 December 2019, hedging contracts to sell an aggregate of 890,000 tonnes of iron ore were outstanding and the fair value loss of these contracts amounted to US$4.3 million as at the 2019 year end. Most of these tonnages were hedged using zero-cost collars strategy using options on the 62% iron ore index, with weighted average strike of puts bought being US$70.6 per tonne and weighted average strike of calls sold being US$89.9 per tonne.

Engineering Services

Revenue from Giproruda, the Group's small-scale engineering services division, grew steadily from US$0.6 million to US$1.4 million, reflecting increased billing.

SITE OPERATING EXPENSES AND SERVICE COSTS BEFORE DEPRECIATION AND AMORTISATION

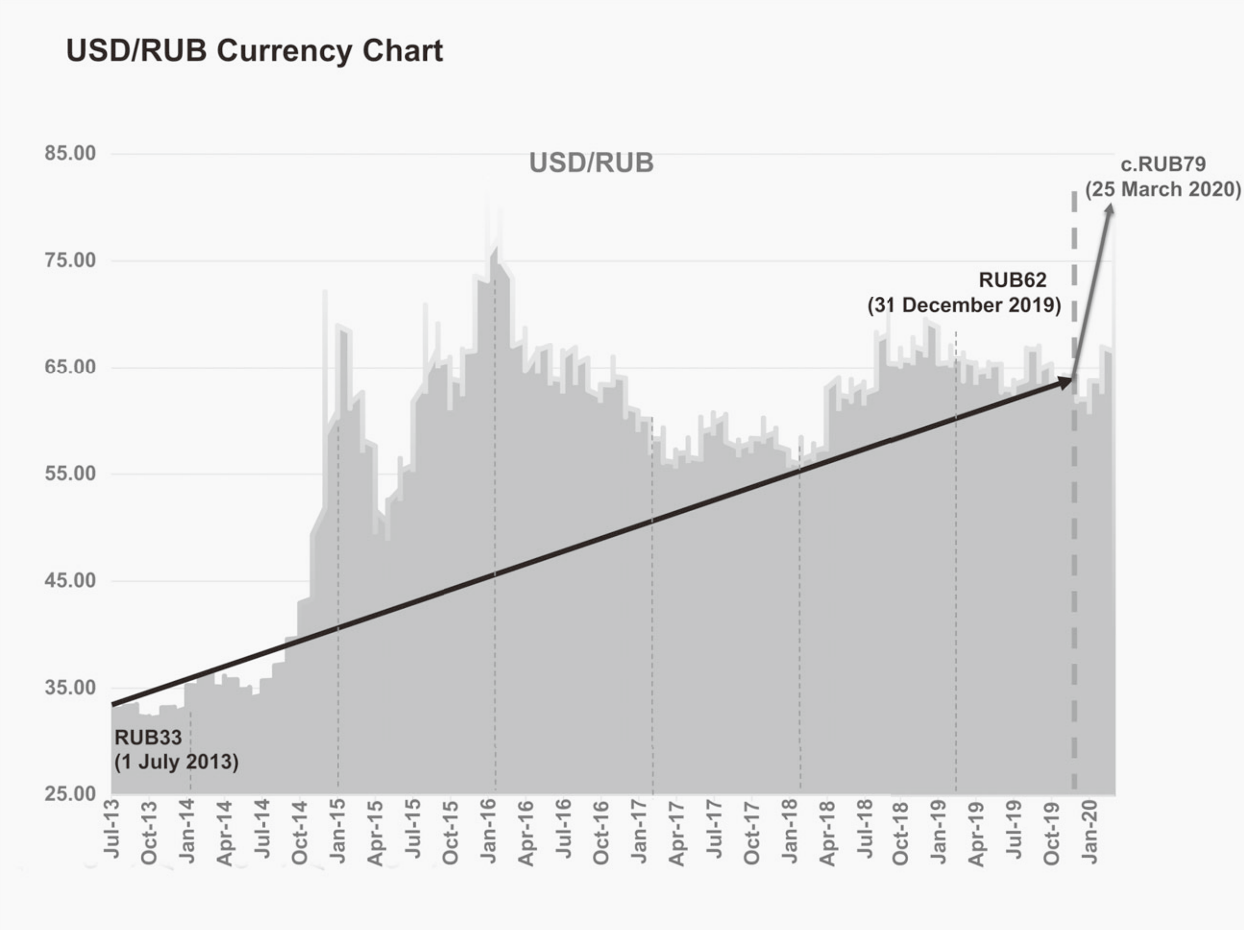
Site operating expenses and service costs mainly reflect the mining and operating expenses incurred by the Group's sole operating mine, the K&S project, in relation to the iron ore concentrate sales. K&S began commercial production in 2017 and has been gradually ramping up to full production capacity. As a result, site operating expenses and service costs before depreciation and amortisation increased to US$135.1 million in the year of 2019 (31 December 2018: US$119.5 million) to accommodate the increased operational size. The 13.1% increase in cost compares favourably to the 16.9% increase in sales revenue, demonstrating the positive results of IRC's strict cost control.

The table below illustrates the details of the key cash cost components of the iron ore concentrate sold:

	2019	2018
	Cash cost per tonne US$/t	Cash cost per tonne US$/t
Mining	**15.8**	14.7
Processing	**9.6**	10.6
Production overheads, site administration and related costs	**12.0**	10.9
Transportation to customers	**15.9**	16.5
Movements in inventories and finished goods	**(1.9)**	(2.5)
Net cash cost	**51.4**	50.2

Thanks to the economies of scale in the operation of K&S, as the mine ramped up its capacity, the cash cost per tonne in 2019 increased by only 2.4% to US$51.4 which is lower than the general inflation rate of 3.1% of Russia in 2019. When the Amur River Bridge is operational, it is expected that the transportation cost to customers in China could be further reduced by up to US$5 per tonne.

Towards the end of December 2019, the Russian Rouble slightly strengthened to close at RUB62 to the US dollar. Despite this small appreciation, the currency generally remained weak throughout 2019. In March 2020, Russian Rouble further depreciated to its lowest level in more than four years. While the Group's income is mainly US Dollars denominated and therefore unaffected by the weakness of Roubles, the Group's operating costs, which are mostly denominated in Roubles, would be reduced as Roubles depreciate. The Group is considering to lock-in the current weak Rouble exchange rate by hedging.



GENERAL ADMINISTRATION EXPENSES BEFORE DEPRECIATION AND AMORTISATION

Special attention continues to be paid to controlling administrative costs. The successful implementation of the cost controls continued to provide benefits with the Group's 2019 general administration costs remained comparable to the previous year despite the increased scale of operation.

OTHER INCOME, GAINS AND LOSSES

Other income, gains and losses mainly represents the lease income derived from the sub-let of part of the floor space of buildings owned by the Group and machineries and wagons subleased.

DEPRECIATION AND AMORTISATION

Depreciation and amortisation increased by US$7.3 million from US$21.2 million in 2018 to US$28.5 million in 2019. The increase is mainly attributable to the increase in depreciable values from the reversal of assets impairment in 2018 and the additional depreciation arising from leased assets.

In previous years, significant impairment of assets was made against the carrying value of K&S due to the instability of the global economy and the weakening of commodity markets. In 2018, with the successful operation of the mine and the recovery of the market price of iron ore, a reversal of asset impairment was made to reflect the increase in the recoverable value of the assets. With a higher asset value after the impairment reversal, depreciation charges increased accordingly in 2019.

To conform to the new accounting standard, HKFRS 16 Leases, which became effective on 1 January 2019, the Group changed its accounting policy in respect of the lease of wagons from third parties by recognising the right-of-use assets of US$12.8 million and the lease liabilities of the same amount. The recognition of the leased assets gave rise to additional depreciation charges.

FOREIGN EXCHANGE LOSS

The foreign exchange loss of US$6.2 million in 2019 was mainly attributable to the exchange loss arising from the bridge loans from Petropavlovsk and other payables and accruals that were mostly denominated in Roubles.

OTHER FINANCIAL COSTS

Other financial costs of US$29.0 million (31 December 2018: US$21.7 million) mainly represents the interest expense on loans from ICBC, Gazprombank and Petropavlovsk. The increase in other financial costs was mainly due to the loans from Gazprombank and Petropavlovsk bearing higher interest rates and the higher guarantee fee charged by Petropavlovsk in respect of the Gazprombank facility.

INCOME TAX CREDIT

The income tax credit of US$3.2 million (31 December 2018 income tax expense: US$0.1 million) mainly represents the refund from the successful overturning of a tax ruling made in previous year which resulted in a tax credit of US$2.1 million in 2019. The movement of deferred tax also gave rise to a tax credit of US$1.1 million in 2019.

LOSS FOR THE YEAR

The improvement of the iron ore concentrate selling price and the rise in the production volume of K&S led to the Group's positive operating results with EBITDA excluding foreign exchange increased by 39.2% to US$33.3 million. However, due to non-recurring and non-operating items, the loss attributable to the owners of the company amounted to US$38.7 million in 2019 (2018: profit of US$68.2 million).

SEGMENT INFORMATION

The mine in production segment, which represents the K&S mine's production and sales, generated an EBITDA of US$44.1 million (31 December 2018: US$35.2 million), reflecting a 25.5% increase. In 2019, this segment posted a profit of US$16.1 million, after taking into account the depreciation and amortisation costs. Kuranakh has been in care and maintenance and is under administration. The engineering segment reduced its losses and almost broke even with the increase in revenue.

CASH FLOW STATEMENT

The following table summaries the key cash flow items of the Group for the year ended 31 December 2019 and 31 December 2018:

	For the year ended 31 December	
US$'000	**2019**	2018
Net cash generated from operations	**32,427**	28,924
Interest paid	**(20,756)**	(12,957)
Capital expenditure	**(5,047)**	(3,374)
Proceeds and repayments of borrowings, net	**(1,340)**	(8,721)
Loan guarantee and debt arrangement fees and waiver fee paid	**(9,450)**	(800)
Other payments, lease liabilities and adjustments, net	**(156)**	(5,432)
Net movement during the year	**(4,322)**	(2,360)
Cash and bank balances (including time and restricted deposits)		
– At 1 January	**8,614**	10,974
– At 31 December	**4,292**	8,614

The net cash generated from operations amounted to US$32.4 million (31 December 2018: US$28.9 million), primarily due to increased cash inflows from the K&S mine. In line with the change in the scale of operation and the higher selling price of iron ore, the accounts receivable balance also rose accordingly. The higher interest rates of the Gazprombank and Petropavlovsk loans resulted in an increase in interest payments from US$13.0 million to US$20.8 million. The capital expenditure of US$5.0 million was incurred mainly by the K&S mine to support the ramping up of its production. Loan guarantee and debt arrangement fees and waiver fee paid mainly reflect the settlement of guarantee fee owed to Petropavlovsk and the arrangement fee incurred in relation to the Gazprombank facility.

LIQUIDITY, FINANCIAL AND CAPITAL RESOURCES

Share capital

There was no change in the share capital of the Company in 2019.

Cash Position and Capital Expenditure

As at 31 December 2019, the carrying amount of the Group's cash, deposits and bank balances was approximately US$4.3 million (31 December 2018: US$8.6 million).

Exploration, Development and Mining Production Activities

For the year ended 31 December 2019, US$138.2 million (31 December 2018: US$124.3 million) was incurred on development and mining production activities. No exploration activity was carried out in 2019 and 2018. The following table details the capital and operating expenditures in 2019 and 2018:

	For the year ended 31 December 2019			For the year ended 31 December 2018		
US$'m	**Operating expenses**	**Capital expenditure**	**Total**	Operating expenses	Capital expenditure	Total
K&S development	**131.6**	**4.6**	**136.2**	118.2	5.7	123.9
Exploration projects and others	**1.6**	**0.4**	**2.0**	0.1	0.3	0.4
	133.2	**5.0**	**138.2**	118.3	6.0	124.3

The table below sets out the details of material new contracts and commitments entered into during 2019 on a by-project basis. The amount was relatively small, reflecting the fact that the K&S mine is close to ramp-up completion.

		For the year ended 31 December	
US$'m	**Nature**	**2019**	2018
K&S	Purchase of property, plant and equipment	**–**	0.7
	Sub-contracting for excavation related works	**–**	6.2
	Sub-contracting for mining works	**0.9**	–
	Sub-contracting for railway and related works	**0.2**	–
Others	Other contracts and commitments	**0.7**	0.7
		1.8	7.6

Borrowings and Charges

As at 31 December 2019, the Group had gross borrowings of US$224.6 million (31 December 2018: US$223.7 million), mainly represents the new long-term borrowing drawn from the Gazprombank loan facility. The Gazprombank loan facility is guaranteed by Petropavlovsk. The Group's weighted average interest rate was approximately 9.2% (31 December 2018: 8.0%) per annum.

The refinancing of the ICBC loan was completed with a drawdown from the Gazprombank loan facility on 19 March 2019. The proceeds from the Gazprombank facility has been applied in accordance with the intended use of proceeds, which was utilised as the working capital of K&S, full repayments of K&S's outstanding principal indebtedness under ICBC facility and settlements of loans and amounts due to Petropavlovsk. The repayment schedule of the new facility with Gazprombank better aligns with the ramping up of K&S's production and should improve the cashflow position of the Group. This is reflected in the amount of borrowing due within one year, as the amount reduced from US$112.0 million as of the 2018 year end to US$20.7 million as of 31 December 2019.

Risk of Exchange Rate Fluctuation

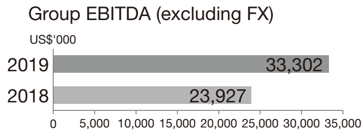
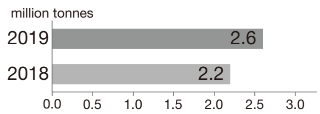
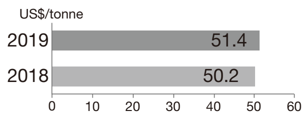
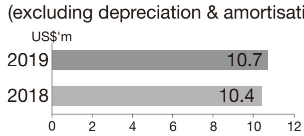
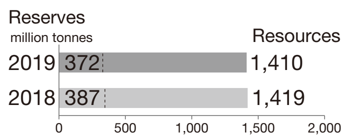
The Group undertakes certain transactions denominated in foreign currencies, principally Russian Roubles and is therefore exposed to exchange rate risk associated with fluctuations in the relative values of US Dollars. Exchange rate risks are mitigated to the extent considered necessary by the Board of Directors, primarily through holding the relevant currencies. As of 31 December 2019, the Group does not undertake any material foreign currency transaction hedging, but the Group has been monitoring the foreign currency exposure and may hedge the exposure if considered appropriate.

Employees and Emolument Policies

As at 31 December 2019, the Group employed approximately 1,760 employees (31 December 2018: 1,698 employees). The emolument policy of the Group is set up by the Remuneration Committee and the remuneration is determined on the basis of the employees' merit, qualifications and competence with reference to market conditions and trends.

KEY PERFORMANCE INDICATORS

A Key Performance Indicator ("KPI") is a measurable value that demonstrates how effective a company is achieving its key business objectives. IRC uses KPIs at multiple levels to evaluate its success at reaching targets. The following indicators enable management to evaluate IRC's performance against its strategic and operating plans.

KPI	CONTEXT	2019 DEVELOPMENT	2019 PERFORMANCE
SAFETY	Our aim is to create a culture of zero-harm and to adhere to strict safety policies and standards for the safety and well-being of the employees.	Safety trainings for operational employees and contractors were conducted by external consultants. All operating companies of the Group are required to have health and safety management systems in place. The Group continues to improve the system when necessary.	**Safety - Outstanding Level** 
Profitability	Profitability focuses on financial performance on medium to long term; EBITDA is a primary and accurate measure of IRC's success. At present, the only project in production, the K&S mine, is in the process of ramping up to full capacity.	K&S is in the commercial production phase and achieved an average of production efficiency of c.81% in 2019. Kuranakh continues to be in care and maintenance and is under administration. The Vanadium joint venture recommenced operation in 2019.	**Profitability - Improving EBITDA** 
Production	IRC is an iron ore concentrates producer and increasing production capacity is crucial in the development of the Group.	K&S successfully operated at full capacity in the month of October 2019. The encouraging performance reflects the achievement of a major milestone in the history of K&S and the next step is to stabilise the operation at this high production rate.	**Production - Increase Gradually** 
Efficiencies & Cash Cost	"Cash Cost" shows the cost of running a mine to produce a given amount of a product. It is a benchmark for operating performance. Cash cost disregards general administration expenses and depreciation.	K&S has proven to be a more efficient mine than Kuranakh. Although K&S's cash cost increased slightly in 2019, the increment is lower than Russian inflation rate.	**Cash Cost - Slightly Higher but Better than Russian Inflation** 
Administrative Overheads	Administrative overheads measure the costs of supporting units for the business to carry out profit making activities.	In 2019, stringent measures of corporate costs cutting continued across the Group.	**Administrative Overheads - Stringent Control** General Administration Expenses (excluding depreciation & amortisation) 
Exploration & Development	Our exploration programmes aim to add value through the discovery of new resources, and increase and confirm the mineable reserves.	Efforts and resources were focused on ramping up of K&S. No exploration activity was carried out during 2019.	**Exploration & Development - Ample Resources and Reserves base** 
ESG & Community	ESG is measured by adhering to the legislation and best practices in the jurisdictions and the community in which we operate.	The integrated Environmental Management System ("EMS") allows IRC to reduce its environmental impact.	**Extensive ESG statistics are given in the Environmental, Social and Governance section.**

KEY PERFORMANCE INDICATORS (CONTINUED...)

	2018 PERFORMANCE	FUTURE OPPORTUNITIES
Good safety performance, LTIFR in 2019 was better than the industry average. The overall number of fatalities and reported injuries maintained at zero in 2019, although the Group's LTIFR increased slightly from 0 in 2018 to 1.04 at 2019.	Outstanding performance in terms of overall safety. The overall number of fatality and reported injuries decreased from 1 and 2 respectively in 2017 to 0 in 2018. The Group LTIFR also decreased from 1 in 2017 to 0 in 2018.	IRC will endeavour to maintain high safety standards and adopt a zero-harm policy throughout its operations. As production ramps up at K&S, educational programmes for employees and contractors will continue to be conducted.
The Group's EBITDA (excluding foreign exchange) improved significantly from US$23.9 million in 2018 to US$33.3 million in 2019. The EBITDA of K&S increased by 25.5% to US$44.1 million.	Positive EBITDA excluded foreign exchange movement of US$23.9 million was recorded in 2018. IRC achieved net profit in two consecutive years.	The Sino-Russian railway bridge, Amur River Bridge, is expected to be operational soon, allowing K&S to reduce transportation cost. There are options for the expansion of K&S to increase production volume for economies of scales.
K&S enhanced its production capabilities in a successful ramp-up programme in which the plant achieved an annual production record by operating at an average capacity of 81% to produce 2.6 million tonnes of iron ore, 15.3% higher than 2018.	Align with the ramp up progress, the production volume of K&S continues to increase. K&S produced 2,234,517 tonnes of iron ore concentrate in 2018, 43% higher than previous year.	Once K&S ramps up to full capacity, cash inflows will be boosted. The future development of K&S Phase 1.5 or Phase 2 projects will enable an increase of total designed capacity to 4.6 million tonnes or 6.3 million tonnes per annum respectively.
The cash cost per tonne in 2019 increased by 2.4% to US$51.4 despite a general inflation of 3.1% in Russia, thanks to the economies of scale and tight cost control.	The average cash cost per tonne of iron ore concentrate increased slightly to US$50.2. Processing cost decreased by 12% in 2018 due to the improved efficiency of K&S production plant.	Unit cash cost is expected to further decrease when K&S has reached full capacity due to economies of scale. The weakness of Rouble can support our production cash cost, as our costs are mainly denominated in Rouble. The Amur River Bridge, due to be operational soon, could further reduce the cost of transportation to customers in China by up to US$5 per tonne.
Successful implementation of the cost control measures keep the expenses level in check with only 2.3% increase in 2019 when comparing to 2018.	General administration costs recorded US$10.4 million, representing an increase of 6% compared to 2017	The Group will continue to carry out tight cost saving measures to minimise the administrative overheads.
The changes in resources and reserves were mainly due to commercial production activities and normal minor oxidation at K&S. Group resources and reserves amounted to 1,410 million tonnes and 372 million tonnes respectively at the end of 2019.	Group resources and reserves amounted to 1,419 million tonnes and 387 million tonnes at the end of 2018, respectively. The movement in resources and reserves mainly represents mining activities at K&S, movements in stockpile and other minor adjustments.	Exploration and development activities will resume as the market conditions and cash flow of the Group improve.
2019 – All employees are trained for environmental protection practices in the workplace. The EMS also applies to all contract organisations which carry out works for the Company.	Integrated EMS has been applied to manage its operations but has also been used for development, implementation and review the management of the Company's environmental policy.	The Group will continue its efforts to reduce energy consumption and water usage, control air pollution and apply waste management measures.

PROJECT REVIEW

K&S

100% owned

Key facts:

65%
Fe grade

3.2Mtpa
Production capacity

11Mtpa
Ore process capacity

240km
To Chinese border

841Mt
Total resources

346Mt
Total reserves

20 years +
Mine life

OVERVIEW

K&S, 100% owned by IRC, is located in the Jewish Autonomous Region (EAO) of the Russian Far East. It is the second full-scale mining and processing operation that the Group has developed. The project consists of two principal deposits, Kimkan and Sutara. The K&S Phase I is to produce 3.2 million tonnes of iron ore concentrate per annum with a grade of 65% Fe. There is an option for a Phase II expansion to produce a total of 6.3 million tonnes of 65% iron ore concentrate per annum. As an interim development between the two phases, IRC is assessing an option to upgrade the Phase I production facility to increase the production capacity to approximately 4.6 million tonnes per annum. The Phase I Processing Plant was built by CNEEC and funded through a project finance facility provided by ICBC. In 2018, IRC successfully entered into a refinancing facility agreement with the leading Russian bank, Gazprombank, to fully replace the ICBC's finance facility. The principal repayment of the Gazprombank facility is weighted towards the latter part of the loan term, so that the repayment pattern will better align with the ramp-up of K&S.

K&S enjoys tremendous geological advantage. The Trans-Siberian Railway is directly linked to the mine site, making it easy to deliver its product to customers. With the use of the Amur River Bridge, which is expected to be completed by the end of 2020, the transportation cost and distances can be further reduced. K&S is located in the Obluchenskoye District of the Jewish Autonomous Region (EAO) in the Russian Far East. The operation is situated 4 kilometres from the town of Izvestkovaya, through which the Trans-Siberian Railway passes. It is also on a federal highway 130 km away from the regional capital Birobidzhan and 300 kilometres from Khabarovsk, the principal city of the Russian Far East.

K&S RAMP-UP PROGRESS ENTERING INTO THE FINAL PHASE

K&S's ramp-up programme was well underway in 2019, with the plant running at 100% production capacity in October. The excellent performance of K&S has not been unchallenged during the year. In the course of the year, the K&S site team encountered and overcame the design flaw of the EPC contractor in the gearbox of the crusher feeders, the technical issues of the ball mills and extreme weather at the mine site that were not under the control of the Company. Although K&S's production was temporarily affected, the production rate of the year remained at c.81%. The Drying Unit is an essential part of the K&S production process as it extracts excess moisture from the iron ore concentrate in order to prevent the product from freezing under the cold weather, enabling production throughout the year. When winter approaches during the year, the Drying Unit capacity rate was limited and, due to the technical issues, the shipment volume of K&S was affected. Together with the minor logistical issues with the Russian railway and, to a lesser extent, the Drying Unit limitations, the shipment level during the year was being restrained, although the plant has the ability to operate at a higher production rate. It is expected that the capacity rate of the Drying Unit would gradually increase. In addition, the need for drying should slowly be reduced from March-April onwards with the warmer spring weather. With the well-experienced site team, IRC remains confident that the remaining issues will be resolved in order to allow K&S to maintain a stable high production level. The current focus is on capacity building and catching up with past deficits.

PRODUCTION

During the 2019, 7,892,500 tonnes of ore was fed to primary processing and 5,422,207 tonnes of pre-concentrate was produced. Finally, 2,576,325 tonnes of iron ore concentrate was produced and 2,464,401 tonnes was sold.

SALES & MARKETING

As K&S is producing more iron ore concentrate, it has also successfully diversified its customer base by selling to customers in various countries and regions, including Russia and China. In addition to selling to its existing customers, K&S made trial shipments on CFR basis to customers in the southern part of China during 2019. Despite having higher transportation costs, the achieved selling price was higher. This illustrates the Group's ability to supply to different geographical markets, as customers diversification allows the Group to better manage transportation, marketing and pricing risks.

UNIT CASH COST

In view of the fact that K&S has not yet achieved its full production capacity, the unit cash cost per tonne of US$51.4 in 2019 has not yet reached its optimum level. Taking into account the possible Rouble depreciation and the opening of the Amur River Bridge to minimise transportation costs, potentially, there is room for K&S to further control its cost level when the mine is fully operational.

SAFETY

LTIFR is a calculation of the number of lost-time injuries per one million hours worked. During 2019, the K&S's safety was regulated with only three injuries and the LTIFR was 1.07 (31 December 2018 LTIFR: 0).

MINING

The Kimkan operation covers an area of approximately 50km^2 and comprises two key ore zones – Central and West. Open pit mining is currently carried out at both zones.

Over the reporting period, the mining contractors mined 9,073,200 tonnes of ore, drilled 458,904 metres and blasted 11,889,750 cubic metres at K&S. Mining contractors are prepared for mining volumes increase in 2020.

AMUR RIVER BRIDGE/TONGJIANG BRIDGE

Amur River Bridge is a national initiative to build a railway bridge across the Amur River border between Russia and China. The Amur River Bridge has been praised as one of the major projects between the two nations. Such infrastructure projects are expected to bring closer economic cooperation which IRC could benefit from.

According to local media, the last steel beam of the Russian-Chinese railway bridge over Amur River was installed and confirmed by the authorities of the Heilongjiang province of China in March 2019. Russia has completed its engineering work on its side of the bridge in full. With China having completed the construction of its part in 2018, the main span of the bridge was connected. The construction and installation of relevant infrastructure works and border checkpoints is currently underway and the bridge is expected to be operational soon. The current total distance from K&S to the Chinese border (Suifenhe) is approximately 1,000 kilometres. The K&S mine is situated approximately 240 kilometres from the bridge site and the closest IRC's customer within China is approximately 180 kilometres from the bridge. When the Bridge is operational, K&S is expected to reduce the transportation cost to the Chinese border by up to US$5 per tonne, allowing K&S to strengthen its position as a low-cost iron ore concentrate producer. In addition, the Bridge will become part of the new export route and will stimulate the creation of new logistical and industrial clusters, improving the transport accessibility of the region which K&S is expected to benefit indirectly.

Kuranakh

100% owned

Key facts:

62.5%
Fe grade

48%
TiO_2 grade

900Ktpa
Fe production capacity

160Ktpa
TiO_2 production capacity

85km^2
Total iron ore licence area

17Mt
Total resources

20 years +
Mine life

OVERVIEW

Kuranakh, 100% owned by IRC, is the Group's first mining operation and the first vertically integrated titano-magnetite operation in Russia, designed, built and managed by IRC. The mine was initiated in 2010 and has moved to care and maintenance since the beginning of 2016 due to the challenging operating environment on the commodity market at that time. The mine is currently under administration in order to minimise the costs, and still has the option of re-opening.

The Kuranakh Mine is located in the Amur Region of the Russian Far East, near the town of Olekma, a principal stop on the BAM Railway. The operation covers an area of approximately 85km^2 and comprises the Kuranakh and Saikta open-pit mines, the on-site Crushing and Screening Plant and the nearby Olekma Processing Plant. The operation produces an iron ore concentrate with a quality content of 62.5% Fe and an ilmenite concentrate with a quality content of 48% TiO_2. Concentrates can be directly loaded onto rail wagons for shipment via the BAM and Trans-Siberian Railways to customers in Russia and China and abroad via the Russian Pacific Sea ports.

SAFETY

As the mine was moved into care and maintenance and is now under administration, there was no injuries and the LTIFR was zero during the year of 2019 (31 December 2018 LTIFR: 0).

IN CARE & MAINTENANCE AND UNDER ADMINISTRATION

Kuranakh is currently under administration and no production or sales were generated in 2019. Although the subsidiary holding Kuranakh has applied for liquidation in order to save on-going costs, IRC retains the option of re-opening Kuranakh or pursuing other development alternatives if the market is favourable.

Garinskoye

99.6% owned

Key facts:

68%
Fe grade

>3,500km^2
Total iron ore licence area

4.6Mtpa
Fe production capacity

260Mt
Total resources

26Mt
Total reserves

20 years +
Mine life

OVERVIEW

Garinskoye, 99.6% owned by IRC, is an advanced exploration project. The project provides an opportunity for a low cost DSO-style operation that can be turned into a large-scale and long-life open pit mining operation.

The project is located in the Amur Region of the Russian Far East, midway between the BAM and Trans-Siberian Railways. With exploration licences for ground covering an area of over 3,500 km^2, the project is the largest in the IRC portfolio in terms of area.

CURRENT DEVELOPMENT

There are two possibilities for Garinskoye to develop. The first option is to develop a large-scale 4.6 million tonnes per annum open-pit operation with a life-of-mine of 20 plus years, which requires the construction of a rail connection. The second option is an intermediate DSO-style operation that does not require a rail connection and can be started in advance of a larger conventional operation. The DSO-style plan comprises a pit with a reserve of 20.2 million tonnes, a grade of 48% Fe, and a stripping ratio of 1.7:1 m^3 per tonne. The DSO-style plan would then be able to produce 1.9 million tonnes per annum, with 55% grade iron ore fines and a life of operation of 8 years. There is an option to further increase the project value at very little additional capital expenditure by adding a further wet magnetic separation stage to produce a high-grade "super-concentrate" with a 68% iron ore content.

In 2013, IRC conducted an internal Bankable Feasibility Study. A third-party verification and a fatal flaws analysis for the DSO-style operation was carried out in 2004.

The Garinskoye project is currently put on hold, subject to the project obtaining the necessary financing as well as the market conditions for iron ore improves.

Other Projects

EXPLORATION PROJECTS & OTHERS

IRC's other exploration projects comprise an extensive portfolio that is diversified by geography, commodity and development stages. This seeks to add value through the discovery of new resources and the increase and confirmation of mineable reserves. Currently, IRC retains these valuable licenses for later development until the market conditions improve. Apart from exploration projects, IRC is also active in the complementary business of the Steel Slag Reprocessing Plant (SRP) and a mining consultancy services agency (Giproruda). As far as the SRP project is concerned, its feedstock was based on the concentrate from Kuranakh, and the latter was moved to care and maintenance during 2016. Successfully sourced feedstock from China, the SRP project with Jianlong Steel recommenced operation in the first half of 2019. Below is a summary of the current portfolio of exploration projects for the Group:

Project	Products/Service	Location
Kostenginskoye* (100% owned)	Iron ore concentrate	Jewish Autonomous Region, Russian Far East
Bolshoi Seym (100% owned)	Ilmenite	Amur Region, Russian Far East
SRP (46% owned)	Vanadium Pentoxide	Heilongjiang, China
Giproruda (70% owned)	Technical mining research and consultancy services	St. Peterburg, Russia

* Resource base for K&S

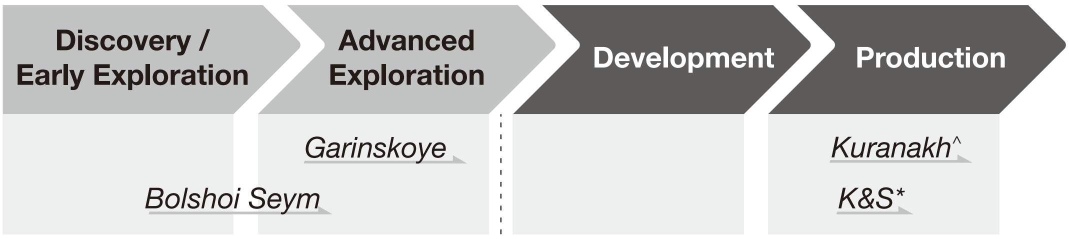
MINERAL RESOURCES AND ORE RESERVES STATEMENT

EXPLORATION OVERVIEW

IRC geologists explore prospective areas, confirming historical exploration results and existing mineable reserves. This mitigates risks during mining operations and reduces mining and processing costs. Data collected during exploration helps to develop strategies, business concepts and optimise mine models.

IRC has established one of the largest geological portfolios of high-quality ferrous ores in the Russian Far East, comprising a wide range of deposits by geography, geology, commodity, extraction and processing style and, most importantly, at different stages of development, thus providing unrivaled options.

The portfolio is divided into production and exploration projects.



* Including Kostenginskoye
^ Under care and maintenance, and administration

OPERATIONS

Over 2019, although no material exploration activities were carried out, changes in resources and reserves were mainly due to commercial production activities and normal minor oxidation at K&S. In the light of these changes, the Group's resources and reserves as at 31 December 2019 are as follows:

31 December 2019		
IRON ORE	RESOURCES	**1,410.0 million tonnes**
		29.1% Fe
	RESERVES	**371.8 million tonnes**
		32.6% Fe

What is a Mineral Resource?
'Mineral Resource' is a concentration or occurrence of solid material of economic interest in or on the earth's crust in such a form, grade (or quality) and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade (or quality), continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted on the basis of specific geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increase geological confidence, into Inferred, Indicated and Measured categories.

What is an Ore Reserve?
Ore Reserves are those portions of Mineral Resources which, following the application of all Modifying Factors, result in an estimated tonnage and grade which, in the opinion of the Competent Person making the estimates, can be the basis of a technically and economically viable project, after taking into account of material relevant Modifying Factors. Ore Reserves are reported as inclusive of marginally economic material and diluting material delivered for treatment or shipped from the mine without treatment.

The table below details the Group's Mineral Resources and Ore Reserves as at 31 December 2019 (after application of geological losses). All figures are prepared in accordance with the guidelines of the JORC Code (2012) for a consistent basis of presentation. On the following pages, a further breakdown by project is available detailing cut-off grades and changes during 2019. Rounding-off of numbers may result in minor computational discrepancies. Where this occurs, such discrepancies are deemed to be insignificant.

Resources Summary

Project	Category	Tonnage Mt	Fe Grade %	Fe Mt	TiO_2 Grade %	TiO_2 Mt
RESOURCES						
Kuranakh	Measured	—	—	—	—	—
	Indicated	8.8	31.1%	2.7	9.8%	0.9
	Inferred	8.4	30.7%	2.6	9.6%	0.8
	Total	17.2	30.9%	5.3	9.7%	1.7
K&S*	Measured	21.1	31.5%	6.6	—	—
	Indicated	358.4	32.7%	117.1	—	—
	Inferred	461.0	30.3%	139.7	—	—
	Total	840.5	31.4%	263.4	—	—
Garinskoye	Measured	—	—	—	—	—
	Indicated	210.9	35.5%	74.9	—	—
	Inferred	48.6	30.8%	15.0	—	—
	Total	259.5	34.7%	89.9	—	—
Bolshoi Seym	Measured	—	—	—	—	—
	Indicated	270.8	17.8%	48.1	7.7%	20.8
	Inferred	22.0	16.9%	3.7	7.7%	1.7
	Total	292.8	17.7%	51.8	7.7%	22.5
Group	**Total Measured**	**21.1**	**31.5%**	**6.6**	**—**	**—**
	Total Indicated	**848.9**	**28.6%**	**242.8**	**7.7%**	**21.7**
	Total Inferred	**540.0**	**29.8%**	**161.0**	**8.2%**	**2.5**
	Total	**1,410.0**	**29.1%**	**410.4**	**7.8%**	**24.2**

* Including Kostenginskoye

Reserves Summary

Project	Category	Tonnage Mt	Fe Grade %	Fe Mt
RESERVES				
Kuranakh	Proven	—	—	—
	Probable	—	—	—
	Total	—	—	—
K&S	Proven	21.7	30.0%	6.5
	Probable	323.9	31.6%	102.4
	Total	345.6	31.5%	108.9
Garinskoye	Proven	—	—	—
	Probable	26.2	47.0%	12.3
	Total	26.2	47.0%	12.3
Group	**Total Proven**	**21.7**	**30.0%**	**6.5**
	Total Probable	**350.1**	**32.8%**	**114.7**
	Total	**371.8**	**32.6%**	**121.2**

Kuranakh

Kuranakh is a medium-sized titanomagnetite and ilmenite deposit located in the Tynda District of the Amur Region in the Russian Far East. Geological exploration and confirmation works were conducted at the deposit between 2004 and 2006. Currently two ore zones have been assigned to mining: Kuranakh and Saikta

Three ore types have been identified within the Kuranakh and Saikta deposits:

1. Ilmenite-titanomagnetite type in massive ores (massive lenticular and streaky congregations)
2. Titanomagnetite-ilmenite type
3. Titanomagnetite-hemoilmenite types (as disseminations, impregnations and pockets) in the gabbroids.

The main useful components are titanium and iron; other components include vanadium, chromium, nickel, and cobalt. Of these, only vanadium is considered to be a useful by-product and is taken into account in the assessment of resources and reserves.

Due to the unsatisfactory iron ore priced environment in previous years, Kuranakh has been in care and maintenance since 2016. The mine is currently under administration, but the plant is available for re-opening if the markets permit the investment decision. As a result, no mining activities have been carried out over the period. Based on the unsatisfactory iron ore priced environment in previous years, Kuranakh's reserves have been proven to be uneconomic and continue assumed to be nil.

The full resources of Kuranakh are stated below:

Kuranakh and Saikta Mineral Resources & Ore Reserves

	Tonnage Mt	Fe Grade %	Fe Mt	TiO_2 Grade %	TiO_2 Mt
RESOURCES					
Kuranakh Pit					
Measured	—	—	—	—	—
Indicated	4.4	32.0%	1.4	10.2%	0.5
Inferred	3.3	31.0%	1.0	9.9%	0.3
Total	7.7	31.6%	2.4	10.1%	0.8
Saikta Pit					
Measured	—	—	—	—	—
Indicated	4.4	30.3%	1.3	9.3%	0.4
Inferred	5.1	30.4%	1.6	9.3%	0.5
Total	9.5	30.4%	2.9	9.3%	0.9
Total Measured	**—**	**—**	**—**	**—**	**—**
Total Indicated	**8.8**	**31.1%**	**2.7**	**9.8%**	**0.9**
Total Inferred	**8.4**	**30.7%**	**2.6**	**9.6%**	**0.8**
Total	**17.2**	**30.9%**	**5.3**	**9.7%**	**1.7**

Assumed average cut-off grades: Kuranakh Fe cut-off grade: 17%.

Kimkan and Sutara

Kimkan and Sutara (K&S) is a large magnetite project located in the Obluchenskoye District of the EAO in the Russian Far East. The project consists of two principal deposits – Kimkan and Sutara. In the calculation of K&S resources and reserves, Kostenginskoye Deposit, which is located at 18 km south of Sutara Deposit and is believed to have a similar structure to Sutara Deposit, has been included in K&S. The Kostenginskoye Deposit represents a potential ore feed extension for K&S to extend the life of the mine. The resources of the Kostenginskoye Deposit were included in the inferred category as part of the total resources of K&S.

To date, all of the necessary exploration activities as well as confirmation drilling have been completed in all areas except for the Kostenginskoye Deposit.

The current mining plan of K&S was based on a feasibility study completed in 2015. The geological model assumes a steep deepening of the tabular ore body. Mining activities begin with the Kimkan deposit first, then the Sutara deposit at a later stage. Resources and reserves figures decreased slightly during 2019 due to mining activities at K&S, movements in stockpiles and other minor adjustments.

The breakdown of mineral resources and ore reserves for K&S is described in the table below:

K&S Mineral Resources & Ore Reserves

	Tonnage Mt	Fe grade %	Fe Mt
Resources			
Kimkan & Sutara			
Measured	21.1	31.5%	6.6
Indicated	358.4	32.7%	117.1
Inferred	281.6	32.0%	90.2
Total	661.1	32.4%	214.0
Kostenginskoye			
Measured	—	—	—
Indicated	—	—	—
Inferred	179.4	27.6%	49.5
Total	179.4	27.6%	49.5
Total Measured	**21.1**	**31.5%**	**6.6**
Total Indicated	**358.4**	**32.7%**	**117.1**
Total Inferred	**461.0**	**30.3%**	**139.7**
Total	**840.5**	**31.4%**	**263.4**
Reserves			
Kimkan & Sutara			
Total Proven	**21.7**	**30.0%**	**6.5**
Total Probable	**323.9**	**31.6%**	**102.4**
Total	**345.6**	**31.5%**	**108.9**

Assumed average cut-off grades: Kimkan & Sutara Pit Fe magnetite cut-off grade: 15%; Kostenginskoye Pit Fe magnetite cut-off grade: 10%.

Garinskoye

Garinskoye Deposit is one of the few large iron ore deposits in the Russian Far East that was explored and studied extensively during the Soviet era. It is located in the Mazanovsky Administrative District, in the Amur Region and situated approximately 300 km from the regional capital of Blagoveschensk.

The deposit was first discovered in 1949 through an aeromagnetic anomaly. Detailed exploration, including pits, trenches, shafts and underground development, together with drill holes were carried out between 1950 and 1958. The dominant form of mineralisation is magnetite, which sees a shift to martite within the oxidation zone. Magnetite ores can be classified into three types of iron grade:

1. High grade at above >50% Fe – sub-divided into low and high phosphorus
2. Average grade from 20% to 50% Fe
3. Low grade from 15% to 20% Fe

Current geological exploration works has been conducted at Garinskoye since 2007, and the works has focused on the prospect for a DSO-style operation since 2011. No new exploration was carried out in 2019. The resources and reserves of Garinskoye have been prepared on the basis of a new set of estimates based on revised geological surveys and a feasibility study in 2015. As no exploration has been carried out and based on last year's iron ore prices as assumptions, the resources and reserves of Garinskoye remained the same in 2019 compared to 2018.

The following table details the Resources and Reserves of Garinskoye:

Garinskoye Mineral Resources & Ore Reserves

	Tonnage Mt	Fe grade %	Fe Mt
Resources			
Measured	—	—	—
Indicated	210.9	35.5%	74.9
Inferred	48.6	30.8%	15.0
Total	**259.5**	**34.7%**	**89.9**
Reserves			
Proven	—	—	—
Probable	26.2	47.0%	12.3
Total	**26.2**	**47.0%**	**12.3**

Assumed average cut-off grades: Garinskoye Fe cut-off grade: 16.5% and Fe magnetite cut-off grade: 9%.

Bolshoi Seym

Bolshoi Seym is located in the Tynda district of Amur region, 40 km from the Kuranakh Deposit. At Bolshoi Seym, the license covers an area of 26 km^2. Potentially economic mineralisation at Bolshoi Seym comprises massive ilmenite and magnetite. Massive mineralisation comprises between 90% to 99% (by volume) of ilmenomagnetite, magnetite and ilmenite. The Bolshoi Seym mineralisation was initially discovered during the apatite-ilmenite ore exploration programme conducted in 1979–1982 by Kalarskaya GRP, a subsidiary of the state-owned company Dalgeologiya.

Systematic exploration of the Bolshoi Seym Deposit was conducted by Vostokgeologia between 2007 and 2009. A total of 170 diamond drill holes were drilled in all zones totaling 39,277 metres, of which 158 were exploration holes, 3 were grade control holes, 5 were technological holes, and 4 were hydrogeological holes. In addition to the drilling, 17 trenches were excavated over a linear distance of 7,893 metres.

A mineral resource estimate of the Bolshoi Seym Deposit was prepared by Micon in compliance with the CIM (Canadian Institute of Mining, Metallurgy and Petroleum) valuation standards. The estimate utilised geological and assay data from diamond drilling and trenching completed by Vostokgeologia in 2007–2009. In 2015, resources were assessed using a 5% TiO_2 cut-off grade and prepared in compliance with the JORC Code (2012).

In 2012, IRC increased its ownership of the Bolshoi Seym Deposit from 49% to 100%.

The following table details the resources applying a 8% TiO_2 cut-off grade.

Bolshoi Seym Ore Resources

	Tonnage Mt	Fe Grade %	Fe Mt	TiO_2 Grade %	TiO_2 Mt
Resources					
Measured	—	—	—	—	—
Indicated	270.8	17.8%	48.1	7.7%	20.8
Inferred	22.0	16.9%	3.7	7.7%	1.7
Total	**292.8**	**17.7%**	**51.8**	**7.7%**	**22.5**

Assumed average cut-off grades: Bolshoi Seym TiO_2 cut-off grade: 8%

ACT RESPONSIBLE, THINK SUSTAINABLE

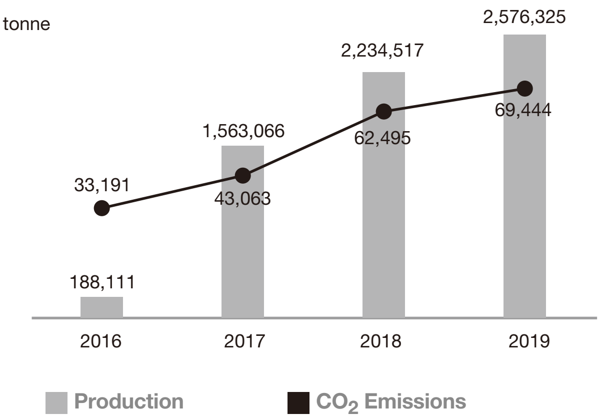
FY2019

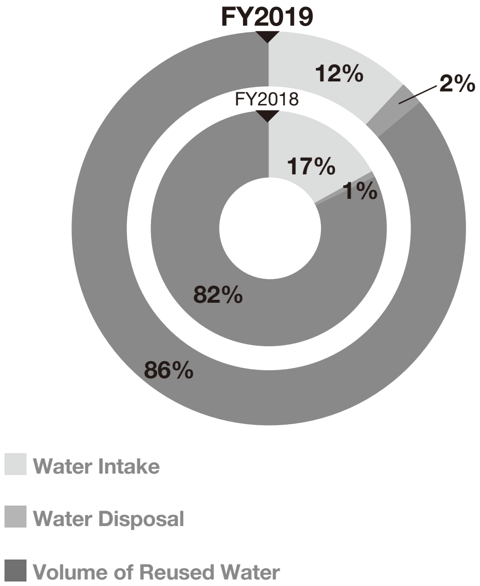
HIGHLIGHTS

Environment

Financial support to EAO educational TV programme channel, mainly highlight the ecological and uniqueness of the region.

CO_2 Emissions Vs Production





Health and Safety

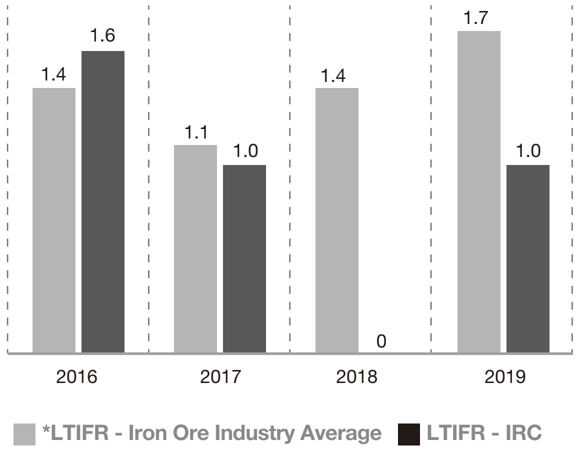
Employees training and development:

Programs on new vocational skills &

operational and crisis safety training

Total trained **529** employees

Lost Time Injury Frequency Rate



* Sources: Department of Mines, Industry Regulation and Safety - Government of Western Australia

ENVIRONMENTAL, SOCIAL AND GOVERNANCE

INTRODUCTION

IRC takes its Environmental, Social and Governance ("ESG") responsibilities seriously. They are a core consideration at every stage of our business, not just the day–to–day mining and processing operations, but also through all our functions from exploration to logistics and administration. This also includes the communities where we operate and through our involvement in charitable works, the wider communities of the Amur and Jewish Autonomous regions of the Russian Far East.

In recognition of these, IRC is the first and only pure–play iron ore company in the Russian Far East, as well as the first mining company in the Jewish Autonomous and Amur regions to be certified for compliance with international standard ISO 14001:2004. Since 2011, policies and strategies originate with the Health, Safety and Environment Committee of the Board of Directors. Implementation is overseen by the Executive Committee and designated HSE teams in Moscow, Birobidzhan and at the operating site.

Finally, together with its largest shareholder, Petropavlovsk PLC, IRC is one of the largest financial contributors to the local economy in the Amur Region. This is repeated in the neighbouring Jewish Autonomous Region with the operation of the K&S Mine, the largest single new investment in the region's history.

SUSTAINABLE DEVELOPMENT POLICY

IRC operations are large–scale projects that cover large areas. Thousands of people are involved on many sites, working across many disciplines. The Company's operations provide a stimulus for the economic development of the Russian Far East and as such have become an integral part of the local economic fabric.

The core constituents of IRC's sustainable development policy are:

1. the provision of safe and healthy working conditions;

2. the rational use of natural resources; and

3. the preservation of a favourable environment for future generations.

HEALTH, SAFETY AND ENVIRONMENT COMMITTEE

The Health, Safety and Environment Committee consists of three Independent Non–Executive Directors – Daniel Rochfort Bradshaw (Chairman), Jonathan Eric Martin Smith and Chuang–fei Li, and is responsible for evaluating the effectiveness of the Group's policies and systems for identifying and managing health, safety and environmental risks within the Group's operations and for ensuring compliance with health, safety and environmental regulatory requirements. The Committee also assesses the performance of the Group with regards to the impact of health, safety, environmental and community relations, decisions and actions. For details of the committee, please refer to page 69 of this report.

Daniel Rochfort Bradshaw
Chairman of HSE committee

Jonathan Martin Smith
Member of HSE committee

Chuang-fei Li
Member of HSE committee

EMPLOYEES, HEALTH & SAFETY

IRC operates a variety of industrial projects, including mines and processing plants in some harsh climatic conditions in the Russian Far East. Mining operations are open pit and heavily mechanised, a positive contrast to labour intensive underground mining.

During 2019, on average, the Group employed a total of 1,711 employees with a male to female ratio of 72%:28%. The number of employees remains comparable to that of 2018. Out of the 1,711 employees, 21 (2018: 15) worked on part-time basis and 58 (2018: 61) were casual labours. In addition to the 1,711 employees, the Group also engaged 576 people from external contractors.

IRC encourages diversified culture in workplace. The Company recruits people for work not only from the Russian Far East, but also from other regions of Russia and the Commonwealth of Independent States ("CIS") and participates in the state program of the resettlement of compatriots. The resettlement program of compatriots involves preferential conditions for obtaining citizenship and compensation for the costs of moving and rearrangement to a new place. At the end of 2019, under the resettlement of compatriots program, the Company employed 7 employees.

Employment Mission & Vision

Attracting, employing and retaining high–quality and competent staff is fundamental to IRC's business performance. Our success at this reflects our progress towards our vision of becoming a leading Sino–Russian champion and the preferred employer in the Russian Far East. We work hard to gain, train and retain our employees and contractor partners, and to provide a safe, proud and disciplined working conditions and environments to all stakeholders involved.

In addition, the core to achieving our human resource goals is safety. The Company's objective is to encourage, facilitate and operate a zero–harm environment through:

– conforming to Russian regulations and international standards of health and safety where practical and reasonable;

– extensive health, safety and basic first aid training on an ongoing basis; and

– regular internal audits and external reviews of health and safety policies and equipment.

Training & Development

Our company is rapidly growing, which makes opportunities for professional and career growth possible. We understand that investments in skilled labour contribute to long–term success, and a key area of focus is on the continuous improvement of qualifications of our employees. Since 2008, the Group provided external and internal training and development of its employees.

Similar to years before, training and development of the Group's personnel in 2019 was conducted by external consultants in the following areas:

– upgrade professional qualifications, learning new vocational skills in the areas such as: "track serviceman", "filtration type", "maintenance technician", "shunting master", "analyst", "sling operator", "pumpman", "beltman" and others dimensions according to our program for 2019; and

– operational and crisis safety training, including labour, industrial and fire safety.

In 2019, in accordance with the training and qualification upgrade program approved by the Company, 529 employees were successfully trained. Of these, 227 company employees were trained in the training centre at K&S. The K&S training centre has a license for professional training, issued by the Education Committee of Jewish Autonomous region No 953 dated 3 April 2014. Only employees of the plant are trained in the training centre. Upon completion of training, the employee is issued a certificate or a certificate equivalent. There are two classrooms and visual training material in the centre. Industrial training takes place in the workplace under the guidance of a teaching staff of production training. The teaching staff includes engineers and technicians at K&S, who have obtained a diploma in vocational retraining to carry out professional activities in the field of education.

For environmental knowledge and environmental conservation training, internal trainings were carried out by the Company in 2019, which included:

– on–going environmental management and awareness training; and

– testing the knowledge of employees and implementing the environmental, operational and technical aspects of the Group, which have been carried out either on-site or in a distance learning mode, such as the "Eco Testing" corporate program.

Also, the Company regularly acquaints the newly recruited employees with the environmental policy of IRC. In 2019, 458 employees were introduced to environmental policy.

Since 2017, the State University of Amur, named after Sholem-Aleichem (Birobidzhan), has accepted applicants (on the basis of completed secondary education) for admission to the University for a degree in Mineral Processing, a "Technician" qualification, full-time and part-time courses, 2 years 10 months (full-time education) and 3 years 10 months (part-time education).

After graduation, graduates are guaranteed employment in the specialty at the K&S Processing Plant. The educational process is carried out within the walls of the university and directly at the educational–production base of the K&S Processing Plant.

In 2020, the first 6 full–time graduates will obtain their diplomas.

Today, at the expense of K&S, the following students study at the university:

– I year – full–time education – 9 people, part–time education – 10 people;

– II year – full–time education – 7 people, part–time education – 13 people;

– III course – full–time education – 6 people.

In 2019, K&S, together with the Directorate of Employment of the Population of the Government of the JAR, signed an agreement on participation in the "Program for increasing labour mobility of the Jewish Autonomous Region in 2020". The basis of the program is, first of all, the comprehensive support of a person and his family when moving for employment, concern for arrangement and painless adaptation in a new place. This will make it possible to invite specialists of shortage professions in our region from the Russian Federation to work at K&S and guarantee compensation for the costs of moving and arranging a new place.

Labour Standards

The employment and labour standards of the Company are guided by the Constitution of the Russian Federation, Labour Code of the Russian Federation and other laws and regulations of the Russian Federation since the majority of our workforce is based in Russia.

As a general rule, employment contracts are concluded for an indefinite term with all employees. Russian labour legislation imposes expressed restrictions on the execution of employment contracts with a definite term of duration. However, an employment contract may be entered into for a fixed term of up to five years in certain cases where labour relations may not be established for an indefinite term due to the nature of the duties or the conditions of performance of such duties as well as in other cases expressly identified by the Federal Law.

An employer may terminate an employment contract only on the basis of specific grounds set out in the Labour Code. An employee made redundant or dismissed from an enterprise due to its liquidation is entitled to receive compensation including a severance payment and, depending on the circumstances, salary payments for a certain period of time.

The Labour Code also provides for additional protections for, or favourable treatment of, certain categories of employees, such as pregnant women, workers under the age of 18, workers engaged in dangerous labour conditions or those working in hostile climatic conditions. Under the Labour Code, it is forbidden to employ, engage or use any forced or juvenile labour and the Federal authorities regularly perform field inspections to ensure compliance with the law.

The Labour Code also sets the regular working week at 40 hours. Any time worked beyond 40 hours per week, as well as work on public holidays and weekends, must be compensated with double payment of labour or set off as an extra day–off.

With the purpose of compliance with the relevant laws and regulations and improving labour productivity and quality, the Company has the following in place:

- the employee professional code of conduct;
- internal code of labour conduct;
- regulations on personal data of the employees;
- remuneration and bonus scheme for the employees;
- regulations of enforcing and vacation of disciplinary penalties;
- dormitory rules;
- regulations on the training centre which provides professional training of the Company's employees and other persons;
- regulations on structural divisions; and
- provisions on charity.

In 2019, the Group was materially in compliance with all relevant employment laws and regulations, including the Labour Code.

Health and Safety

The Group is responsible for maintaining a safe working environment that meets applicable industrial safety requirements. Health and safety is managed at an operational level, with support provided by the Group to ensure consistent compliance with Russian regulations. All projects are required to have health and safety management systems in place and reflect good international practice. The principal law regulating industrial safety is the Russian Health and Safety Law which applies, in particular, to industrial facilities and sites where certain activities are conducted, including sites where the processing of minerals is conducted and certain hazardous substances are used. The Health and Safety Law also contains a comprehensive list of dangerous substances and their permitted concentration, and extends to facilities and sites where these substances are used. Regulations adopted pursuant to the Health and Safety Law further address safety rules for mining and production operations conducted by the Group.

Any construction, reconstruction, liquidation or other activities in relation to regulated industrial sites is subject to a state industrial safety review. Any deviation from project documentation in the process of construction, reconstruction or liquidation of regulated industrial sites is prohibited unless reviewed by a licensed expert and approved by the Federal Service for Environmental, Technological and Nuclear Supervision or other relevant regulatory authorities. Legal entities that operate such regulated industrial facilities and sites have a wide range of obligations under Russian law, in particular under the Health and Safety Law and the Labour Code.

To comply with the Federal Law No. 426–Ф3 (Art. 3, clause 6, article 15 as of December 28, 2013 “On Conducting a Special Assessment of Working Conditions”, every year the Company’s Health & Safety Department identifies harmful and/or dangerous factors in the production environment and the labor process, and assesses the level of their impact on the employees, taking into account deviations of their actual values from the established standards of working conditions. Based on the results of assessment of working conditions, reports establishing classes of working conditions at workplaces and lists of measures to improve working conditions are prepared.

The Group recognises that, in addition to its statutory obligations to protect the health of all its workers, its staff have a right to operate in a safe working environment. All staff receive health and safety training as part of the initial induction process. The Group arranges annual conferences to bring key staff together, allowing them to share experiences and discuss good practice. In addition, all staff received annual health and safety “refresher” training courses to update them on the latest health and safety techniques and procedures being implemented by the Group. Health and safety monitoring and internal inspections of working environments are undertaken to ensure compliance with Russian regulatory requirements as well as with international best practice. Our goal is to guarantee the health and safety of the work of our employees, contractors, as well as guests arriving to visit our enterprises.

The Company’s safety and health policies are as follows:

– comply with all procedures and requirements required in accordance with labor legislation;

– implement standards that reflect the best practices, and constantly maintain favorable conditions for work;

– conduct the necessary briefing, training, monitoring employees;

– counsel and inform employees about changes in the field of labor protection;

– conduct regular risk assessments and operational safety audits in order to monitor and improve the Company’s operations.

All of the Group’s operating companies in Russia are required to have in place health and safety management systems, as reflected in detailed health and safety manuals, to meet Russian regulatory requirements and the Group’s policies. The Group has extensive training programmes and specialist health and safety personnel. The Group investigates every accident in accordance with established procedures and prepares accident reports. The Group also pays special attention to safety introduction for new employees and organises bi–monthly health and safety training for all employees. Personnel are provided with appropriate safety equipment.

The Federal authorities planned visit each of the Group’s operations with the periodicity from once a year, to once in three years to inspect explosives storage, industrial facilities, and to check on labour and environmental aspects as well as health and safety procedures and documentation.

Safety Statistics 2012–2019 (Russian Standard Scale)

	2012		2013		2014		2015		2016		2017		2018		**2019**	
	Injuries	LTIFR	Injuries	LTIFR	Injuries	LTIFR	Injuries	LTIFR	Injuries	LTIFR	Injuries	LTIFR	Injuries	LTIFR	**Injuries**	**LTIFR**
Kuranakh	6	2.55	9	3.90	7	3.44	3	1.90	2	4.80	0	0.00	0	0.00	**0**	**0.00**
K&S	0	0.00	1	1.00	1	0.81	0	0.00	1	0.68	2	1.05	0	0.00	**3**	**1.07**
Other projects	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	**0**	**0.00**
Group	6	1.77	10	3.00	8	2.42	3	1.18	3	1.57	2	0.99	0	0.00	**3**	**1.04**

The safety and well–being of our staff and the community near the K&S mine are of the highest importance to everyone at IRC. In 2019, it is pleased to report zero operational fatalities and our low rate of lost time due to injury of only 1.04 per 1,000,000 man–hours worked on site, a credit to our team in K&S. Our people are our greatest asset and we are committed to raising our safety standards further during the coming years. While we believe the presence of the K&S mine has significantly enhanced the well–being of our host communities, we are very conscious of the risks associated with mining operations to staff and the surrounding community, and hence we proactively manage these risks. We are working closely with the community and redoubling our efforts to create a safer environment.

ENVIRONMENTAL MANAGEMENT SYSTEM & ENVIRONMENTAL POLICY

Minimising the impact of our operations on the environment is one of the major constituents of IRC's sustainable development policy. The Company's management team treats activity in this field as a matter of major importance and essential business priority.

Since 2011, the IRC group of companies has implemented an integral environmental management system ("EMS") which is certified by the French certification body AFNOR Certification for compliance with the requirements of the international standard ISO 14001. Currently, EMS in the IRC group of companies continue to comply with all requirements of the ISO 14001 although formal certification is not conducted due to cost reasons. In order to further confirm the functioning of an effective environmental management system, an annual self – assessment of the system is conducted in the group of companies, as stipulated by the new requirements of the international standard ISO 14001.

The integrated EMS is part of the general management system used by the Company to manage its operations, including exploration, mining, processing and industrial and civil construction. It is also used for development, implementation and review of the Company's environmental policy management.

During the course of its operations, the atmosphere, underground and surface waters, soil and vegetative cover, geological terrain, animal life in water ecosystems and around the Group's projects are impacted. Major steps have been taken to minimise the Group's impact on the environment at all stages, including by adhering to and complying with the following environmental policies:

1. compliance with the environmental laws of the Russian Federation and international agreements;

2. minimising the impact on the environment and biodiversity where the Group operates through measures that improve and optimise the environmental management system;

3. minimising the impact of operations on the indigenous populations where the Group operates, in addition to providing support to indigenous communities to preserve their lifestyle and contribute to sustainable development;

4. use of scientific research and developments to remove or reduce the impact of operations on the environment and reduce the consumption of materials and energy;

5. preparation of contingency plans in the event of a health and safety, environmental or natural disaster or emergency;

6. promoting ecological awareness to employees and stakeholders where the Group operates;

7. encouraging vendors and contractors to adhere to the Company's environmental and safety policies;

8. disclosing the Company's ecological strategy, research and data to the public, in addition to conducting public consultations and hearings;

9. commitments of the Board and senior management of IRC to adhere to the safety and environmental policies, and environmental management system in all decisions; and

10. involving all employees in the environmental management system through training and incentive programmes.

The main aims of the Group's environmental policy are achieved through the implementation of the following activities:

1. adherence to local environmental law requirements and international standards of best practice where practical and reasonable;

2. environmental monitoring of the followings:

   – air pollutants and emissions (including greenhouse gases);

   – land use and reclamation;

   – waste management (including hazardous substances);

   – water management; and

   – energy consumption and conservation

3. biodiversity conservation;

4. community engagement through:

   – stakeholders engagement;

   – public hearings and discussions; and

   – environmental education

It is worth mentioning that, in accordance with the requirements of the international standard ISO 14001, all employees undergo training to understand the environmental protection activities at their work places. The EMS further extends to be applied to all contract organisations carrying out works on the Group's premises. Thus, the proper functioning of an environmental management system reduces the impact of our operations on the environment, thereby encouraging a healthy and ecological culture for our employees.

REQUIREMENTS OF ENVIRONMENTAL LEGISLATION

IRC complies with and often exceeds the standards of Russian legislation and international best practices in its environmental policies. The main Russian Federal Environmental Legislation and Standards which apply to the Group's activities include:

- No. 7, 2002 "Environmental protection";
- No. 2395–1, 1992 "Subsoil Law";
- No. 136, 2001 "Land Code";
- No. 33, 1995 "Specially Protected Natural Territories";
- No. 52, 1995 "Wild Animals";
- No. 116, 1997 "Industrial Safety of Hazardous Production Facilities";
- No. 89, 1998 "Production and Consumption of Waste";
- No. 52, 1999 "Sanitary–Epidemiological Welfare of the Population";
- No. 96, 1999 "Protection of Atmospheric Air";
- No. 190, 2004 "Urban Development Code";
- No. 166, 2004 "Fisheries and Conservation of Aquatic Biological Resources";
- No. 74, 2006 "Water Code";
- No. 416, 2011 "Water supply and water disposal";
- No. 174, 1995 "Ecological expertise";
- No. 99, 2011 "On licensing certain types of activities";
- No. 442, 2003 "On the transboundary movement of waste";
- No. 200, 2006 "Forest Code of the Russian Federation";
- No. 1458, 2014 "On the procedure for determining technology as the best available technology, as well as development, updating and publishing information technology guides using the best available technology";

– No. 219, 2014 “Introducing of changes into the Federal law “Environment protection” and specific legal acts of the Russian Federation” ;

– Sanitary – hygienic standard 2.1.5.1315–03 “Maximum Permissible Concentration of Chemical Substances in the Ambient Waters of Household, Portable, Cultural and General Water Use Facilities”;

– Sanitary – hygienic standard 2.1.6.3492–17 “Environmental pollution in the atmosphere and human settlements”;

– Sanitary – hygienic standard 2.2.5.3532–18 “Maximum Permissible Concentrations of Hazardous Substances in the Work Air”;

– Sanitary – hygienic standard 2.1.6.2309–07 “Safe Reference Levels of Impact of Pollutants in the Community Air”;

– GOST R 56062–2014 “Industrial ecological control. General provisions”;

– GOST R 56061–2014 “Industrial ecological control. Requirements for the program of the industrial ecological control”;

– GOST R 56059–2014 “Industrial ecological monitoring. General provisions”;

– GOST R 56060–2014 “Industrial ecological monitoring. Monitoring of the condition and pollution of the environment on the territories of wastes placement”;

– GOST R 56063–2014 “Industrial ecological monitoring. Requirements for the programs of industrial ecological monitoring”;

– GOST R 56828.24–2017 “Best available technology. Energy saving. Guidelines for the application of best available energy efficiency technologies.”;

– GOST R 56828.27–2017 “Best available technology. Resource saving. Methodology of waste treatment in order to obtain secondary material resources.”;

– GOST R 55100–2012 “Resource saving. The best available waste management technologies in the mining industry. Aspects of effective use.”;

– GOST R 54298–2010 “Environmental management system. Certification of Environmental management system for compliance GOST P 14001–2007.”;

– HS 2.1.7.2041–06 “Maximum permissible concentrations of chemicals in the soil”;

– HS 2.1.5.2307–07 “Maximum permissible concentrations of chemicals in the water bodies of drinking and household water use.”; and

– GOST 17.1.3.07-82 “Protection of nature. Hydrosphere. Guidelines/Surface water accounting”.

ENVIRONMENTAL MONITORING, CONTROL AND MEASURING

Development of the mining industry inevitably affects the environment. A comprehensive assessment of impact of K&S's activities on the environment is carried out in the course of industrial environmental control and monitoring, in compliance with Russian laws and international rules. For that purpose we cooperate with accredited laboratories and advanced research organisations that have the appropriate licenses and permits.

IRC has a comprehensive environmental monitoring system, including monitoring the state of environment, assessment and forecasting of changes of environmental conditions under the influence of natural and anthropogenic factors. Monitoring covers the following areas:

– atmospheric air;

– natural waters (subsurface and underground);

– bottom sediments and top soil in stream flow;

– flora and fauna;

– aquatic ecosystems; and

– radiation

Monitoring the quality of natural water

IRC monitors air emissions and solid waste sources, along with process control parameters and fuel and power resources on a regular basis with the data used to better manage operations.

Objectives of industrial environmental control are to:

- check the conformity of the technological process with design decisions;
- control of hazardous waste management;
- control of atmospheric air, land and water bodies, environmental protection measures; and
- control of physical environmental factors (noise and vibration).

As part of the monitoring programmes, more than 72,000 analyses of various environmental components have been conducted since 2004 and more than 30,000 waste-water and industrial emissions tests have been carried out since 2009.

To comply with the new environmental regulations in 2019, the Company has developed and approved Industrial Environmental Control Programs for “The Industrial site”, “Accommodation camp” and “Construction Base”. The report on implementation of industrial environmental control is being prepared.

In accordance with the industrial ecological control and environmental monitoring, it is considered that IRC’s activities have not exceeded any maximum limits or failed to meet any standards.

AIR POLLUTANTS AND EMISSIONS

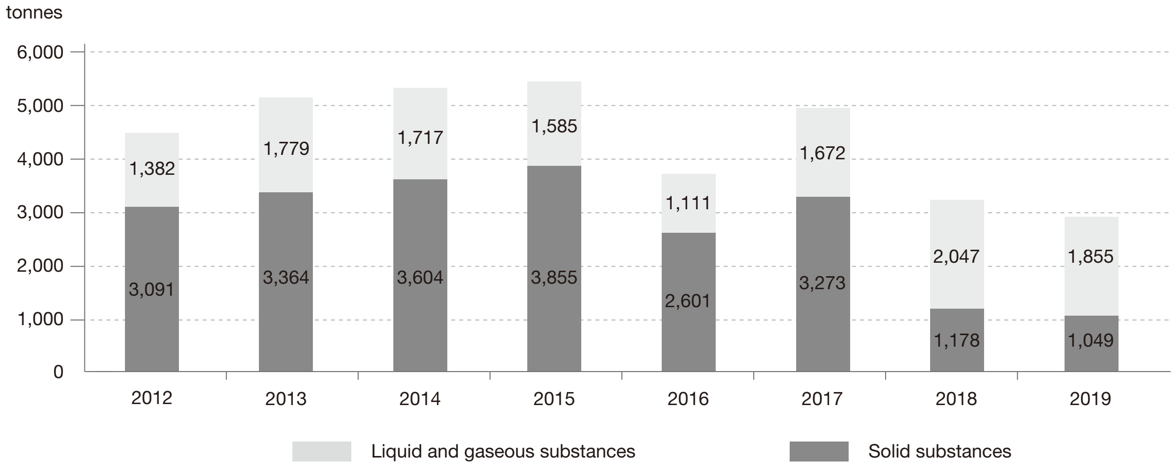
The key air pollutants produced by the Group’s operations are as below, which are mainly produced by mining and processing operations.

Liquid and gaseous substances:	Solid substances:
carbon monoxide	inorganic dust (>70% SiO_2)
nitrogen dioxide	inorganic dust (70–20% SiO_2)
sulfur dioxide	inorganic dust (<20% SiO_2)
nitrogen oxides	PM10
saturates	PM2.5
benzopyrene	dialuminium trioxide and etc.
ethanol and etc.	

In 2019, air emissions from stationary sources decreased by 10% compared to 2018 and amounted to 2,904 tonnes. The entire share of emissions is accounted for by the K&S. The calculation of the share of air emissions is based on the approved standards of maximum permissible emissions, in accordance with air emissions permits for stationary sources located on the territory of the mining and processing complex, valid until 2 August, 2022 and field measurements.

The measurement will be based on the actual atmospheric pollutant emission from stationary objects by calculating the gas-air mixture at the emission source outlet.

Emissions of Air Pollutants from Stationary Sources, 2012–2019 (tonnes)



Stationary emission sources within the licensed areas are installed and operated under the approved draft code provisions for maximum permissible emissions. In addition, the operating companies obtained atmospheric pollutant emission permits.

In accordance with the new requirements of the nature conservation laws of the Russian Federation, the Group ecologists sent an application to register the existing sites of the Group which generate negative impact on the environment, with assignment of categories for them and levels of ecological inspection. In order to improve quality of air and take actions to prevent air pollution and minimize air emissions, the following actions were taken:

– developing dust suppression schedules by watering. Monitoring of this schedule is ongoing to improve efficiencies;

– efficiency of dust and gas cleaning units at the heating plant “Centralnaya” and accommodation camp are systematically controlled in line with approved manuals to avoid bunker overflow with collected particles of dust and ash (industrial emissions treatment efficiency is 90.2%);

– industrial emissions sampling platforms are being installed at the Processing Plant at the input and output of the dust and gas cleaning units. Design of industrial emissions sampling platforms is 90% complete;

– extending the industrial emissions purification programme that reached 90.2% in 2019. Aim to deepen the implementation of the programme through future renovation and replacement opportunities at the plants;

– continuously monitoring of motor vehicles’ exhaust smoke capacities during technical inspections;

– carefully monitoring energy consumption targets and fuel utilisation limits to ensure they fall within approved limits; and

– stopped using diesel power stations as power sources due to the completion of electrification of the facilities (with exception of the Zapadny and Sutara pits).

According to the results of environmental studies conducted in 2019 at the site and in the project sanitary zone, the actual emissions volume did not exceed the maximum permissible emissions standards set in the current permits.

Taking into consideration that chemical reagents were not used in the process cycle – from mining operations to production of the concentrate, the degree of air pollution at the project site estimated by the integrated index of air pollution in 2019 is “low”.

GREENHOUSE GAS EMISSIONS

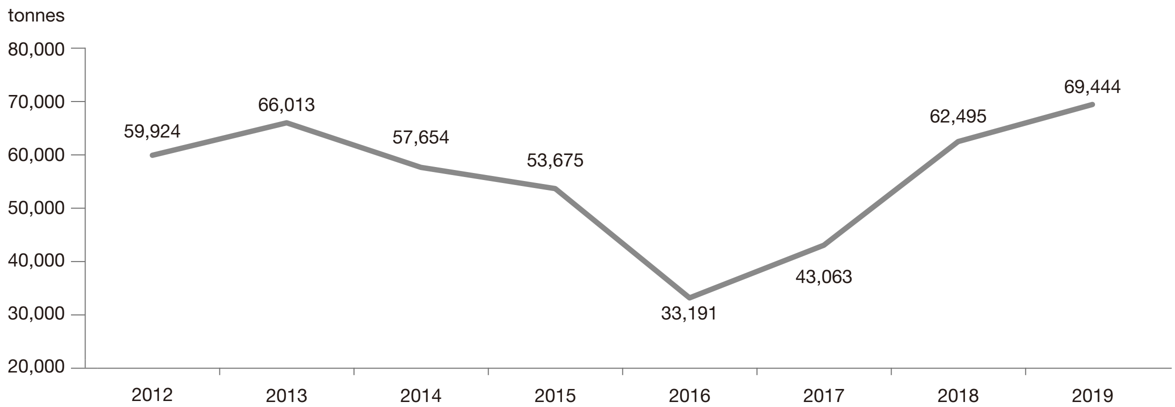
The greenhouse gas emissions produced by the Group is mainly as a result of fuel used at the project sites. The indicator of impact of the greenhouse gas emissions on the environment is reflected in CO_2 equivalent, which includes greenhouse gases such as carbon dioxide, methane, nitrous oxide and cooling agents.

In 2019, an increase in release of greenhouse gases has been noted due to the increase in the usage of construction fleet involved in topping of the starting dyke, formation of medium dyke of the tailings dam, and construction of the road to the Sutara site.

In 2019, estimated greenhouse gas emission was 69,444 tonnes of CO_2 equivalent, which was higher than the level of 2018 by 11%. However, this compares positively to the 15% increase in production volume at K&S.

To avoid statistical discrepancy, we have updated 2018 figure to take into consideration data on coal burning in the Drying Unit which was not accounted for as it was at pre–commissioning stage.

Greenhouse Gas Emissions, 2012–2019



Summary of Air Pollutant & Emission Statistics 2012–2019

	Unit	2012	2013	2014	2015	2016	2017	2018	2019
Air Pollutants & Emissions									
Mass of emitted hazardous pollutants:									
Solid substances	t	3,091	3,364	3,604	3,855	2,601	3,273	1,178	**1,049**
Liquid and gaseous	t	1,382	1,779	1,717	1,585	1,111	1,672	2,047	**1,855**
Total	t	4,473	5,143	5,321	5,440	3,712	4,945	3,225	**2,904**
Greenhouse gas emissions CO_2 equivalent									
Gasoline combustion	t	439	467	566	555	569	539	580	**616**
Diesel fuel combustion	t	42,050	47,967	36,260	30,949	7,609	2,939	3,634	**4,467**
Kerosene combustion	t	0	1	1	0	0	1	1	**1**
Coal combustion	t	17,435	17,578	20,827	22,171	25,013	39,585	58,280	**64,360**
Total	t	59,924	66,013	57,654	53,675	33,191	43,064	62,495	**69,444**
Rate of permissible discharge:									
Permissible release of solids	%	92	86	90	78	69	97	100	**89**
Permissible release of liquid and gases	%	101	81	86	85	69	87	100	**91**
Pollutants removed by gas treatment:									
Removed solid	t	2,510	2,418	2,884	3,147	3,246	24,617	46,565	**46,565**
Removed liquid and gaseous substances	t	526	602	783	843	843	853	0	**0**
Total removed	t	3,036	3,020	3,667	3,990	4,089	25,470	46,565	**46,565**

LAND USE AND RECLAMATION

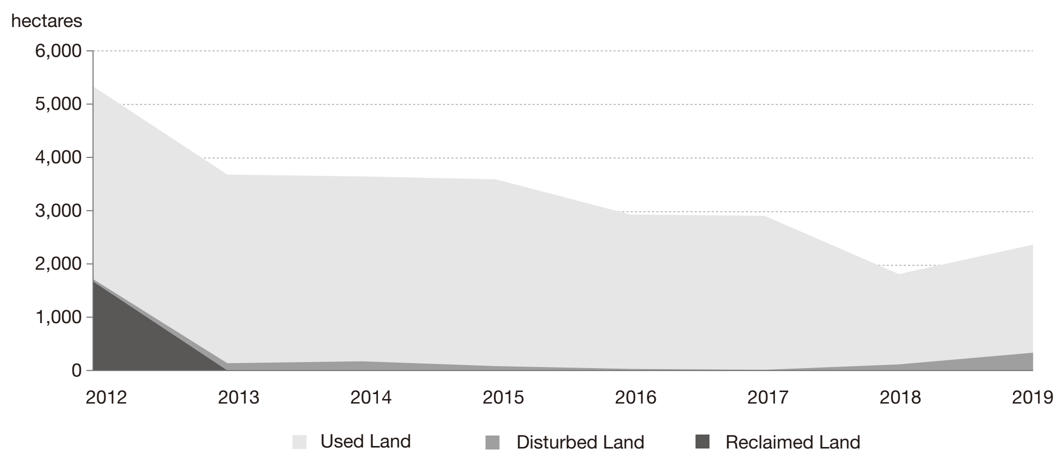
At the end of 2019, the total area of IRC's sites amounted to 2,028 hectares, 333 hectares (19.6%) more than that in 2018. The increase of the land used is attributed to signing new land lease agreements at Kimkan and Sutara (for overburden dumps, tailings management facilities, power supply facilities, Sutara river diversion channel).

Any land parcel that is utilised for use will be restored to its previous state through various engineering and biological solutions. Land reclamation work is carried out in accordance with environmental regulations and, when doing so, will take into consideration the natural surroundings of sites. The major component of reclamation work is the removal and preservation of fertile topsoil that will ultimately be restored to the site.

Due to the expiration of the forest lands lease agreement at Garinskoye, 1.21 hectares of disturbed lands have been recultivated.

Correlation of lands used, disturbed and reclaimed by IRC is presented at the chart below.

Land Use and Reclamation, 2012–2019



Land Use & Reclamation Statistics 2012–2019

	Unit	2012	2013	2014	2015	2016	2017	2018	2019
Landlease:									
Total	ha	3,616	3,540	3,470	3,505	2,898	2,890	1,695	**2,028**
New surfaces disturbed in the reporting period	ha	46	137	173	83	30	13	113	**163**
Recultivated land during the year									
Reclaimed land	ha	1,670	0	0	0	0	0	2	**1**
Used topsoil	m^3	0	0	0	0	0	5,280	13,876	**0**
Preservation of topsoil									
Removed to stockpiles	m^3	143,900	42,000	0	0	0	0	0	**0**
Total topsoil stored at 31 December	m^3	1,393,700	1,434,853	1,306,853	1,306,856	1,306,856	1,301,576	1,287,700	**1,287,700**
Forest plantation									
Total	ha	0	0	0	0	0	0	0	**0**

WASTE MANAGEMENT

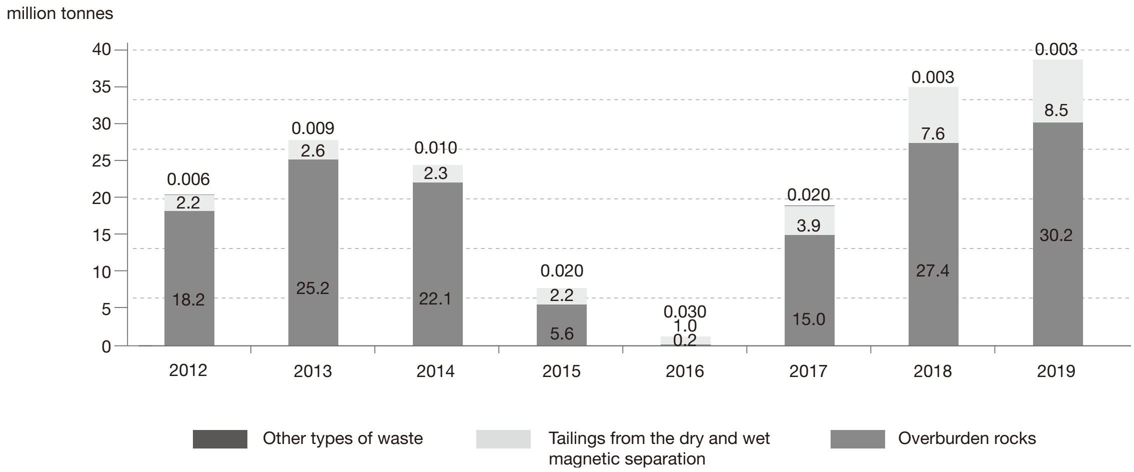
IRC uses five internationally recognised categories to classify hazardous waste:

Class V (practically non–hazardous wastes) – more than **99.99%** from all types of waste. These are all industrial wastes: overburden rocks, tailings of wet and dry magnetic separation, and also construction wastes, waste metal and the other types of waste.
Class IV (low–hazard wastes) – approximately **0.0005%** from all types of waste. This class of waste includes both solid and liquid domestic wastes.
Class III (moderately hazardous wastes) – approximately **$1.1x10^{-5}$%** from all types of waste. This includes oil contaminated wastes.
Class II (highly hazardous wastes) – approximately **$6.3x10^{-7}$%** from all types of waste. This includes used sulphuric battery acid and waste batteries.
Class I (extremely hazardous wastes) – less than **$1.9x10^{-6}$%** from all types of wastes. e.g. mercury–filled lamps.

Staff training in hazardous waste management and labelling is conducted regularly. Efforts are made to ensure the universal labelling of hazardous materials is performed according to international standards.

The total volume of industrial and household waste generated in 2019 increased by 10.5% and reached 38,637,978 tonnes, including: overburden of 30,162,780 tonnes, approximately 78.07% of total waste and; wet and dry tailings of 8,471,827 tonnes, approximately 21.93% of total waste; other types of waste of 3,371 tonnes, approximately 0.01% of total waste. The 10.5% increase compares positively to the 15.3% increase in production volume in 2019.

Waste Volume, 2012–2019



The increase in the volume of overburden and dry and wet magnetic separation tails is associated with the increase in mining and processing volumes and concentrate production.

Treatment & Recycling of Waste

IRC constantly works on optimisation in treatment of wastes and also on active reuse of wastes during its production, so that volumes of displaced wastes can be minimised, and consequently can reduce its impact on the environment.

In 2019, 6,029,906 tonnes of wastes from the Group was recycled, 99.5% of which was tailings waste. Wet magnetic separation waste generated during 2019 was fully used in the formation of the tailings bed and the extension of tailing dam embankments. The dry magnetic separation waste and bottom ash waste were used in repair and construction of roads, when filling of construction sites and in preparation of de–icing products. In addition, sawdust was used as absorbent of oil products.

Quantity of wastes transported to the licensed organisations for further treatment was 73,964 tonnes. The main part of which is liquid wastes from K&S.

IRC has developed and approved waste generation standards and waste disposal limits. Across its Russian operations, IRC is implementing the “Green Office” initiative, targeting a reduction in the use of paper, committing to the use of totally chlorine free (TCF) paper, certified by the Forest Stewardship Council – FSC, as well as the collection and recycling of waste paper.

The Group arranges centralised locations for the separate collection of aluminum, glass, plastic, paper, waste batteries and office equipment for subsequent transfer to specialised organisations for recycling.

In 2019, 4.6 tonnes of paper and paperboard waste were recycled, which is equivalent to preventing the cutting of 46 trees and the emission of 7.82 tonnes of CO_2 into the atmosphere, as well as saving 92,000 litres of water and 4600 kWh of electricity.

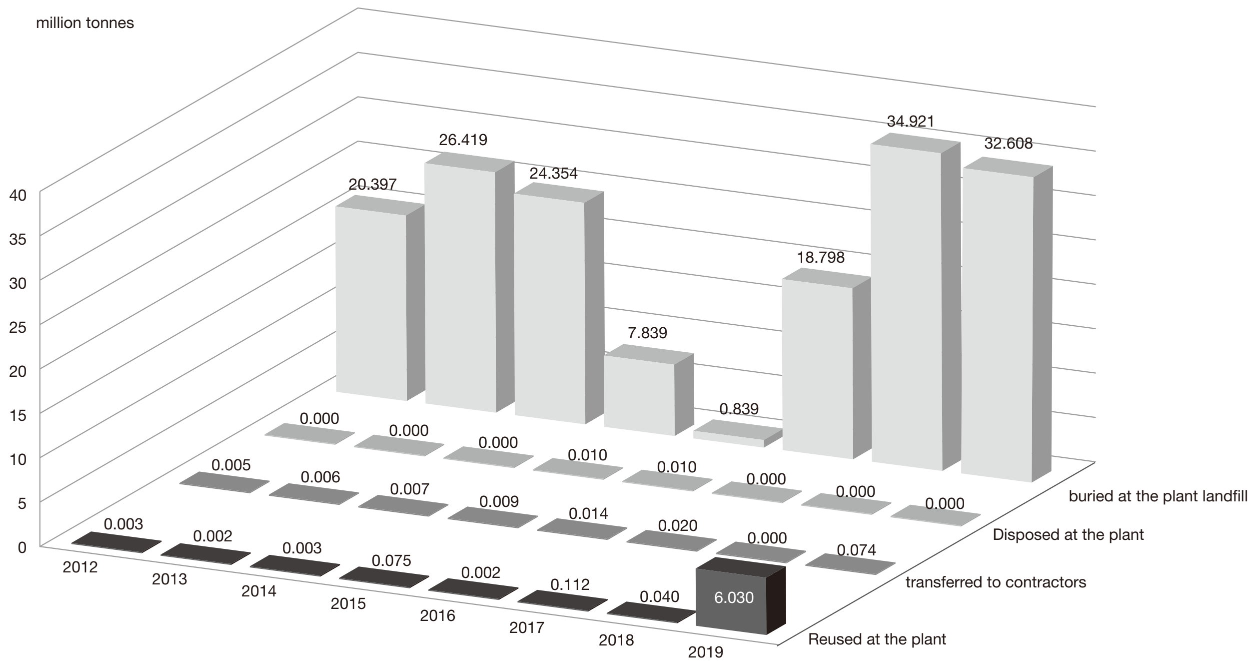
In 2019, 2.7 tonnes of plastic waste was generated during the production activities of the Group. The transfer of the waste to specialised organisations for treatment is scheduled in the second quarter of 2020.

In 2019, 55.3 kg of used batteries were received from the Company's employees, which were transferred for recycling to specialised organisations, which prevented 55,300 m^2 of soil and 1,106,000 litres of water from contamination by heavy metals.

Used batteries collection point

Used batteries to be transferred to specialised organisation

Waste Management, 2012–2019



Waste Management Statistics 2012–2019

	Unit	2012	2013	2014	2015	2016	2017	2018	2019
Formed Waste:									
Total	t	20,412,291	27,837,914	24,373,977	7,861,251	1,220,067	18,932,593	34,962,031	**38,637,978**
Wastes without notice of overburdens and tailings:	t	7,564	8,353	10,213	22,350	25,493	24,823	3,134	**3,371**
Class I	t	0.37	0.46	0.59	0.83	0.23	0.36	0.39	**0.75**
Class II	t	5.77	6.92	5.74	4.18	0.26	1.59	0.04	**0.24**
Class III	t	146.88	184.11	163.42	110.39	27.39	68.52	18.48	**47.66**
Class IV	t	269.09	236.30	180.10	10,052.07	9,970.11	2,582.74	190.57	**182.45**
Class V	t	7,142	7,925	9,863	12,182	15,495	22,170	2,925	**3,140**
Waste from operations:	t	20,397,162	27,821,209	24,353,551	7,838,902	1,194,574	18,907,770	34,958,897	**38,634,607**
Overburden rocks	t	18,222,979	25,188,323	22,101,404	5,602,431	150,161	14,989,050	27,370,170	**30,162,780**
Wet tailings	t	675,681	722,893	631,970	659,411	489,588	2,007,880	5,306,664	**6,001,495**
Tailings	t	1,498,502	1,909,993	1,620,177	1,577,060	554,825	1,910,840	2,282,063	**2,470,332**
Waste Management:									
Neutralized at the plant	t	17	28	22	9,816	9,809	0	0	**0**
Reused at the plant	t	2,546	2,484	2,696	74,624	1,589	111,721	40,453	**6,029,906**
Buried at plant landfill	t	20,397,162	26,418,779	24,353,551	7,838,902	838,885	18,797,987	34,921,456	**32,608,000**
Transferred to contractors	t	4,771	5,763	7,411	9,291	14,074	20,032	26.77	**73,964**

WATER MANAGEMENT

In 2019, the water intake of the Group increased by 24,601 m^3 to 971,335 m^3, of which 967,457 m^3 was sourced from natural water objects and 3,878 m^3 from the existing municipal systems.

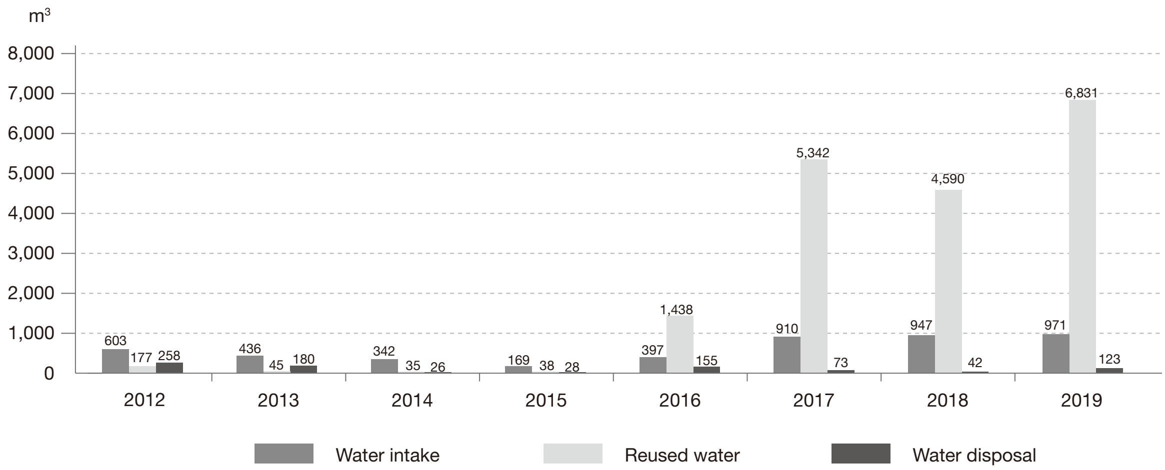
Increase in the volume of withdrawn water from the active water intake “Snarsky” was due to the growth of iron ore concentrates production rate (fresh water is used in those technological processes where it is impossible to use recirculated water) and by the increase in the number of people living in the accommodation camp compared to 2018 figures.

The volume of recirculated water in 2019 was 6,830,525 m^3. It was used in recirculating water supply system for dust suppression in pits and on access roads. The volume has increased due to increase in iron ore concentrates production at K&S. Launching of a new pulp line that required more recirculated water also resulted in the increase of the consumption.

Water disposal in 2019 was 122,914 m^3 in total, of which 50,814 m^3 was allocated to the abstraction of treated water into natural water bodies, and 16,396 m^3 to the existing sewerage utilities of the settlement.

The increase in the amount of treated water discharged into natural water bodies is associated with the installation of open pit drainage at the “Central” quarry for pumping drainage water beyond the boundaries of the open pit field to water sedimenter No. 2, where it is purified to fishery quality standards for subsequent discharge into a surface water body.

Water Consumption and Disposal, 2012–2019 (Km²)



Data of the Group's water consumption for operation is based on water usage agreement contracts concluded with designated suppliers with grants for usage of water body on the surface and/or licenses for subsoil usage (for underground sources).

Data of the Group's consumption of water from available public service systems is determined based on purchase and sales contracts. These arrangements allow the Group to purchase sufficient amount of water for its operations, and the Group has not been faced with any shortages in water supply.

Water Management Statistics 2012–2019

	Unit	2012	2013	2014	2015	2016	2017	2018	**2019**
Water intake:	m³	602,632	436,010	342,349	168,825	397,440	909,902	946,734	**971,335**
Water disposal:	m³	257,604	179,752	25,875	28,207	154,563	73,128	41,916	**122,914**
Volume of reused water:	m³	177,064	44,878	34,900	38,466	1,437,849	5,342,000	4,589,575	**6,830,525**

ENERGY CONSUMPTION AND CONSERVATION

IRC pays special attention to energy conservation and efficiency. We use multiple software programs, combined with GPS sensors that track vehicles location, idling time and fuel levels to monitor consumption patterns. These data are in turn linked to other softwares for process analysis, accounting and inventory management to lower costs and improve working capital. In terms of software, "Autograph" and "Production Reporting" software have been introduced at the mines allowing better control and rational use of fuel resources. Across the Group, the following measures continue to be applied:

– annual repair of boilers at boiler houses of 65 MW and 10 MW, which led to improvement in the efficiency of coal combustion as a result of a decrease in air inflow;

– installation of light sensors on the administration building; and

– installation of 347 LED lights for the processing plant.

In 2019, consumption of fuel and power resources was 35,670 tonnes, an increase of 10.4% compared to 2018, but is lower than the increase in production volume of 15.3%.

The increase in energy consumption is associated with an active increase in production, an increase in the volume of mining operations and the volume of product processed.

Energy Consumption & Conservation Statistics 2012–2019

	Unit	2012	2013	2014	2015	2016	2017	2018	2019
Consumption:									
Coil	t	9,663	9,742	11,543	12,288	13,863	22,379	32,300	**35,670**
Diesel fuel	l	15,938,978	18,181,913	13,744,216	11,731,094	2,883,972	1,121,079	1,376,983	**1,686,477**
Gasoline	l	187,237	199,043	241,282	236,567	242,854	233,004	250,818	**263,567**
Kerosene	l	55	350	400	0	50	231	234	**240**

BIODIVERSITY CONSERVATION

Different kind of activities were conducted to preserve and maintain biodiversity in and around the Group's operations with the aim of protecting critical habitats and improving the natural habitat of animals and plants. Examples in 2019 include:

- as a part of the approved Site Planting Program for 2019, greenery was planted in the accommodation camp area at K&S. 125 broadleaved trees and 63 conifers have been planted near the vegetable storage, accommodation block#2 and #4, between the administration building and the heating plant. 60 coniferous trees have also been planted near the processing plant and administration building.

- Forest fire prevention measures have been taken, including arrangement and maintenance of three fire extinguishing equipment points, installation of 17 fire safety information boards, renewal of 16 warning notice plates, maintenance of 15 recreation and smoking areas, and maintenance of firebreaks which covers 24.8 km.

OPERATING PRACTICES

Supply chain management

For the purchasing, production and services for IRC, the Company holds open tenders for proposals which include a questionnaire for tender participants on environmental protection and system of ecological management.

In order to ensure that suppliers and contractors fulfil the requirements in terms of labour protection, industrial and environmental safety, when preparing the contracts, the texts of the contracts specify the obligations of the executor in respect of labour protection, industrial safety and environmental protection.

Product responsibility

Management of the production quality is one of the main factors in increase of the competitiveness of the plant production on the consumer market. The quality control in IRC is implemented at all production stages, starting from supply of the raw material and ending with loading of the ready production.

In order to provide and maintain high quality of the produced goods, the division of laboratory samples preparation within the Technical Control Department was set up at the production site. The employees, according to the technological sampling map of the processing plant and technological control of the minerals separation process, regularly monitor the quality indicators of mining feedstock and final product produced, and also perform a check of process compliance with the applicable technical requirements.

The quality control of the production is performed to define compliance with the technical conditions, regulations, GOSTs and other normative documents related to quality of the products. For the purposes of providing reliable information to the customers on the safety of industrial use, storage, transportation and utilisation of chemical products, the Company issued and registered a Material Safety Data Sheet (MSDS) for the produced iron ore concentrate. It represents a compulsory integral part of technical documentation for the products and includes a warning marking about dangerous properties of industrial products on the human body.

In case of deviations from the specified quality parameters of the product, process engineers of the plant are to undertake prompt measures to detect all bottlenecks in the production process and eliminate them, which minimise the risk of deviations in future. Final product is shipped to consumers in bulk in open wagons by rail.

In accordance with the current Safety Data Sheet, iron ore concentrate is non–radioactive, non–toxic, non–combustible, fire and explosion safe.

Ethics and Integrity

IRC is committed to conducting its business and operations with high standards of ethics, honesty and integrity, in compliance with all applicable laws, regulations and the Group's policies. This requires all members of the Group to uphold an aligned standard of behaviours that exceeds statutory mandates. Applicable to our directors, officers and employees, these policies ensure responsible behaviours and protection to stakeholders' rights in case of breach.

Topics covered include but not limited to:

- Bribery, gifts and entertainment;
- Conflicts of interest;
- Fair competition;
- Inside information;
- Discrimination, harassment and inappropriate conduct;
- Equal opportunities;
- Privacy and information protection;
- Workplace health and safety;
- Considerate and civic responsibility; and
- Whistleblowing to report improper conduct

Anti–corruption

As required under Russian law (No. 273, 2008 "Anti–corruption") and also voluntarily assumed obligations, IRC actively works on prevention and fighting corruption by implementing anti–corruption policies which concern not only activity within the Group, but also relation with the state and business partners. The Group's anti–corruption policies are guided by the transparency principle. Although the Group engages in charity and sponsorship events, it is carried out in compliance with the relevant laws and regulations. Internal documents of the Group are required to comply with anti–corruption policies, and the Group is constantly improving its system of open purchase procedures to reduce the opportunities of corruption taking place. The relationships with contractors are checked to prevent any undisclosed related party and other potential conflict of interest issues, and internal investigations are carried out when there are incidents of damage to product or equipment. The Group also has a "Corporate trust mail" which is an important component of the Group's implementation of its anti–corruption policies as it allows staff to provide information and feedback, which the Group can then use to investigate and resolve any situations where corruption or conflicts of interests have arisen or may potentially arise.

Whistleblowing

IRC's Improper Conduct Notification Policy encourages all internal and external stakeholders to report actual or suspected improper conduct in confidence to the Group. Employees can make written reports via mail or email. Following a report, an independent senior staff member will conduct an investigation on behalf of the Audit Committee, assisted by relevant Internal Audit, Human Resources and Legal functions. Results including the final disposition, impact, implications, and disciplinary or corrective actions are reported to the chairman of the Executive Committee and to the Board and/or regulatory authorities where appropriate.

STAKEHOLDERS ENGAGEMENT

In the Russian Far East, IRC increased its stakeholders' activities in 2019, predominantly under its "Corporate Framework Programme of Stakeholders' Engagement and Corporate Standards" and its "Communication in the Environmental Management System" programmes. The Company's activities aim to form constructive dialogues with all stakeholders in the region; working closely with stakeholders, engaging them at all stages of the project with timely disclosure and information, and providing mechanisms to air grievances and make claims, as well as reporting and monitoring all procedures.

In 2019 there have been no new complaints or suggestions on environmental issues.

PUBLIC HEARINGS AND DISCUSSIONS

Public hearings and other forms of public consultations give all concerned parties (community, technical specialists and representatives of state regulatory bodies) the possibility to express their requests as part of direct dialogue with the Group, raise concerns related to project implementation, and receive answers on points of interest. IRC managers and dedicated specialists regularly participate in such public hearings and discussions. The public participation meetings are conducted on a regular basis.

ENVIRONMENTAL EDUCATION

One of the major principles of the Group's Environmental Policy is to educate IRC staff and the population living in and around the Company's operations about the environment. IRC regularly organises environmental education to both the Group's and contractor workers, as well as to the local population.

Since 2009, IRC has provided financial support to STS, the Jewish Autonomous Region (EAO) educational TV programme channel. These programmes highlight the ecological and environmental uniqueness of the region and the challenges it faces.

Between 2009 and 2019, the Company prepared 37 editions of the Ecological Bulletin of the JAR, three of which were in 2019. The programs were devoted to:

- construction of a bridge over the Sutara river to develop Sutara iron ore deposit;
- landscaping of the project site; and
- recruitment of positions of head of environmental department and environmental engineer at K&S.

Funding allocated in 2019 was RUB168,000 (approximately US$2,706).

STATE ENVIRONMENTAL SUPERVISION (CONTROL)

As part of compliance with environmental laws, regulations and rules at the enterprises of the Group, the implementation of environmental protection measures on a regular basis, field and documentary checks are carried out by state control (supervision) bodies.

In 2019, 10 inspections were carried out at LLC "KS GOK" for compliance with legislation in the field of production and consumption waste management, water legislation and legislation in the field of atmospheric air protection, 9 of which were unscheduled.

As a result of inspections, no violations of the requirements of legislation in the field of environmental protection were noted.

Summary of IRC Environmental Statistics 2012–2019

Performance Indices	Unit	2012	2013	2014	2015	2016	2017	2018	**2019**
1. Air Pollutants & Emissions									
Mass of emitted hazardous pollutants:									
Solid substances	t	3,091	3,364	3,604	3,855	2,601	3,273	1,178	**1,049**
Liquid and gaseous substances	t	1,382	1,779	1,717	1,585	1,111	1,672	2,047	**1,855**
Total	t	4,473	5,143	5,321	5,440	3,712	4,945	3,225	**2,904**
Greenhouse gases emissions (CO_2):									
Gasoline combustion	t	439	467	566	555	569	539	580	**616**
Diesel fuel combustion	t	42,050	47,967	36,260	30,949	7,609	2,939	3,634	**4,467**
Kerosene combustion	t	0	1	1	0	0	1	1	**1**
Coal combustion	t	17,435	17,578	20,827	22,171	25,013	39,585	58,280	**64,360**
Total	t	59,924	66,013	57,654	53,675	33,191	43,064	62,495	**69,444**
Rate of permissible discharge:									
Permissible release of solids	%	92	86	90	78	69	97	100	**89**
Permissible release of liquid and gases	%	101	81	86	85	69	87	100	**91**
Pollutants removed by gas treatment:									
Removed solid substance	t	2,510	2,418	2,884	3,147	3,246	24,617	46,565	**46,565**
Removed liquid and gaseous substances	t	526	602	783	843	843	853	0	**0**
Total removed	t	3,036	3,020	3,667	3,990	4,089	25,470	46,565	**46,565**
2. Land Use & Reclamation									
Land lease:									
Total	ha	3,616	3,540	3,470	3,505	2,898	2,890	1,695	**2,208**
New surfaces disturbed in the reporting period	ha	46	137	173	83	30	13	113	**163**
Recultivated land during the year									
Reclaimed land	ha	1,670	0	0	0	0	0	2	**1**
Used topsoil	m^3	0	0	0	0	0	5,280	0.0	**0.0**
Preservation of topsoil									
Removed to stockpiles	m^3	143,900	42,000	0	0	0	0	0	**0**
Total topsoil stored at 31 December	m^3	1,393,700	1,434,853	1,306,853	1,306,856	1,306,856	1,301,576	1,287,700	**1,287,700**
Forest plantation									
Total	ha	0	0	0	0	0	0	0	**0**
3. Waste Management									
Formed Waste:									
Total	t	20,412,291	27,837,914	24,373,977	7,861,251	1,220,067	18,932,593	34,962,031	**38,637,978**
Wastes without notice of overburdens and tailings	t	7,564	8,353	10,213	22,350	25,493	24,823	3,134	**3,371**
Class I	t	0.37	0.46	0.59	0.83	0.23	0.36	0.39	**0.75**
Class II	t	5.77	6.92	5.74	4.18	0.26	1.59	0.04	**0.24**
Class III	t	146.88	184.11	163.42	110.39	27.39	68.52	18.48	**47.66**
Class IV	t	269.09	236.30	180.10	10,052.07	9,970.11	2,582.74	190.57	**182.45**
Class V	t	7,142	7,925	9,863	12,182	15,495	22,170	2,925	**3,140**
Waste from operations:	t	20,397,162	27,821,209	24,353,551	7,838,902	1,194,574	18,907,770	34,958,897	**38,634,607**
Overburden rocks	t	18,222,979	25,188,323	22,101,404	5,602,431	150,161	14,989,050	27,370,170	**30,162,780**
Wet tailings	t	675,681	722,893	631,970	659,411	489,588	2,007,880	5,306,664	**6,001,495**
Tailings	t	1,498,502	1,909,993	1,620,177	1,577,060	554,825	1,910,840	2,282,063	**2,470,332**
Waste Management:									
Disposed at the plant	t	17	28	22	9,816	9,809	0	0	**0**
Reused at the plant	t	2,546	2,484	2,696	74,624	1,589	111,721	40,453	**6,029,906**
Buried at plant landfill	t	20,397,162	26,418,779	24,353,551	7,838,902	838,885	18,797,987	34,921,456	**32,608,000**
Transferred to contractors	t	4,771	5,763	7,411	9,291	14,074	20,032	26.77	**73,964**
4. Water Management:									
Water intake	m^3	602,632	436,010	342,349	168,825	397,440	909,902	946,734	**971,335**
Water disposal	m^3	257,604	179,752	25,875	28,207	154,563	73,128	41,916	**122,914**
Volume of reused water	m^3	177,064	44,878	34,900	38,466	1,437,849	5,342,000	4,589,575	**6,830,525**
5. Energy Consumption & Conservation									
Coil	t	9,663	9,742	11,543	12,288	13,863	22,379	32,300	**35,670**
Diesel fuel	l	15,938,978	18,181,913	13,744,216	11,731,094	2,883,972	1,121,079	1,376,983	**1,686,477**
Gasoline	l	187,237	199,043	241,282	236,567	242,854	233,004	250,818	**263,567**
Kerosene	l	55	350	400	0	50	231	234	**240**

CORPORATE GOVERNANCE REPORT

CORPORATE GOVERNANCE PRACTICE

The Board of Directors (the "Board") of IRC is committed to promoting good corporate governance to safeguard the interests of the shareholders and to enhance the Group's performance. The Group believes that conducting its businesses in an open and responsible manner and following good corporate governance practices serve its long-term interests and those of its shareholders.

The Board as a whole is responsible for performing the corporate governance duties and ensuring compliance with the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited (the "Stock Exchange") (the "Listing Rules"). The Board reviews at least annually the corporate governance practices of the Company to ensure its continuous compliance with the Corporate Governance Code (the "CG Code") as stated in Appendix 14 to the Listing Rules, and make appropriate changes if considered necessary.

BOARD OF DIRECTORS

The Board provides leadership and supervises the overall direction of the Group's businesses.

As at 31 December 2019, the Board comprised of nine Directors with two Executive Directors and seven Non-Executive Directors, of which five of them – representing more than half of the Board – are Independent Non-Executive Directors. The number of Independent Non-Executive Directors meets the requirements under Rule 3.10(A) of the Listing Rules. Each of the Independent Non-Executive Directors has made an annual confirmation of independence pursuant to Rule 3.13 of the Listing Rules. The Non-Executive Directors (including the Independent Non-Executive Directors) are appointed for a specific term not exceeding three years and are subject to retirement by rotation. Daniel Rochfort Bradshaw, Jonathan Eric Martin Smith and Chuang-fei Li have served as Independent Non-executive Directors of the Company for more than 9 years. During the years of appointment, they have demonstrated their abilities to provide an independent view to the Company's matters. Notwithstanding their years of service as Independent Non-Executive Directors of the Company, the Nomination Committee and the Board are of the view that they are able to continue to fulfill their role as required. Independent Non-Executive Directors are identified as such in all corporate communications containing the names of the Directors. An updated list of the directors identifying the Independent Non-Executive Directors and the roles and functions of the directors is maintained on the websites of the Company and the Stock Exchange. The roles of the chairman and the chief executive are separated and are performed by Peter Hambro and Yury Makarov, respectively.

The current composition of the Board is characterised by significant diversity in terms of nationality, age, professional background and skills.

The Board believes that the balance between Executive and Non-Executive Directors is reasonable and adequate to provide sufficient checks and balances that safeguard the interests of shareholders and the Group. The Non-Executive Directors provide the Group with diverse expertise and experience. Their views and participation in Board and committee meetings bring independent judgement and advice on issues relating to the Group's strategies, performance, conflicts of interest and management process, ensuring that the interests of all shareholders are taken into account. Two of the Independent Non-Executive Directors possess the appropriate professional accounting qualifications or related financial management expertise as required under the Listing Rules.

The Group provides briefings and other training to develop and refresh the directors' knowledge and skills. The Group, together with its legal counsel and external auditors, continuously update directors on the latest developments regarding the Listing Rules and other applicable regulatory requirements, to ensure compliance and enhance their awareness of good corporate governance practices.

During the year, the Company organised a formal training session for the directors of the Company. The training session covered topics including updates on Listing Rules and the corporate governance environment.

A summary of training received by the directors for the year ended 31 December 2019 is as follows:

Directors	Type of training
Executive Directors	
Yury Makarov	A,B
Danila Kotlyarov	A,B
Non-Executive Directors	
Peter Hambro	A,B
Patrick Chi Kin Cheng	A,B
Independent Non-Executive Directors	
Daniel Rochfort Bradshaw	A,B
Simon Murray	B
Jonathan Eric Martin Smith	A,B
Chuang-fei Li	A,B
Raymond Woo	A,B

Notes:

A: Attending briefing sessions and/or seminars

B: Reading seminar materials and updates relating to the latest development of the Listing Rules and other applicable regulatory requirements

The Board meets regularly to review the Group's operational performance, financial statements, material investments in new projects, dividend policy, major financings, treasury policies and changes in accounting policies. All directors have access to board papers and related materials which are provided in a timely manner, and are able to include matters in the agenda for board meetings. For the year ended 31 December 2019, the Chairman of the Company held a number of meetings with the Non-Executive Directors (including the Independent Non-Executive Directors) without the presence of the Executive Directors.

The Board held six meetings in 2019 and the attendance of individual directors is set out in the table on page 69.

The Company Secretary supports the Chairman, the Board and the Board Committees by ensuring good information flow and that the policies and procedures of the Board are followed. The Company Secretary advises the Board on governance matters and facilitates the induction and professional development of Directors. The Company Secretary is an employee of the Company and is appointed by the Board. All Directors may call upon the Company Secretary for advice and assistance at any time in respect to their duties and the effective operation of the Board and Board Committees. The Company Secretary also plays an essential role in the relationship between the Company and its shareholders, including assisting the Board in discharging its obligations to shareholders pursuant to the Listing Rules.

The day-to-day management and operation of the Group are delegated to the Executive Committee ("EC"), which comprises the Executive Directors, the Company Secretary and other senior management members of the Group. The EC is the principal management decision making body on all day-to-day operations and business affairs of the Group. The EC operates under guidelines and delegated authorities from the Board and meets on a regular basis.

AUDIT COMMITTEE

The Audit Committee consists of three Independent Non-Executive Directors – Chuang-fei Li (Chairman), Daniel Rochfort Bradshaw and Jonathan Eric Martin Smith. The principal duties of the Committee include the following:

– to review the accounting principles and practices adopted by the Group;
– to review and supervise the Group's financial reporting system, risk management and internal control procedures; and
– to review the independence and objectivity of the external auditor, the scope of audit services and related audit fees payable to the external auditor.

During 2019, the Audit Committee reviewed the independence and objectivity of the external auditor, the interim and annual reports and held discussions with the external auditor regarding financial reporting, compliance, scope of audit and related audit fees, policies for maintaining independence and reported to the Board. The Company has an internal audit function which reports directly to the Audit Committee. The Audit Committee also reviewed the effectiveness of the Group's risk management, internal audit function and internal controls system. The terms of reference for the Audit Committee are maintained on the websites of the Company and the Stock Exchange.

The Committee met two times in 2019 and the attendance of Committee members is set out in the table on page 69.

REMUNERATION COMMITTEE

The Remuneration Committee is chaired by Jonathan Eric Martin Smith and its other members are Chuang-fei Li and Daniel Rochfort Bradshaw, all of whom are Independent Non-Executive Directors. The principal duty of the Committee is to review and make recommendations to the Board on the Group's policy and structure for all remuneration of directors and senior management.

The Remuneration Committee reviews the structure of remuneration for the board of directors on an ongoing basis and has the responsibility for the determination, within agreed terms of reference, of specific remuneration packages for all directors and other members of the Executive Committee, including salaries, retirement benefits, bonuses, long-term incentives, benefits in kind and other compensation payments. The Remuneration Committee is committed to bringing independent thought and scrutiny to the development and review process of the Group with regards to remuneration.

The Company's remuneration policy is designed to attract, retain and motivate the highly talented individuals needed to deliver its business strategy and to maximise shareholder value. Consistent with previous years, the policy for 2019 and so far as practicable, for subsequent years, is framed around the following principles:

- remuneration arrangements will be designed to support the Company's business strategy and to align it with the interests of the Company's shareholders;

- total reward levels will be set at appropriate levels to reflect the competitive global market in which the Company operates, with the intention of positioning such levels within a peer group of global mining companies;

- a high proportion of the remuneration should be "at risk", with performance-related remuneration making up at least 50% of the total potential remuneration for Executive Committee members; and

- performance-related payments will be subject to the satisfaction of demanding and stretching performance targets over the short and long term, which are designed to promote the long-term success of the Group. These performance targets will be set in the context of the prospects of the Group, the prevailing economic environment in which it operates and the relative performance against that of competitor companies.

The Remuneration Committee considers that a successful remuneration policy needs to be sufficiently flexible to take into account future changes in the business environment and in remuneration practices. Consequently, the remuneration policy and the Remuneration Committee's terms of reference are reviewed annually to reflect matters such as changes to corporate governance best practice or changes to accounting standards or business practices among peer group mining companies. This will help ensure that the policy continues to provide the Company with a competitive reward strategy. In doing so, the Remuneration Committee will take into account the relevant Listing Rules, the guidance of independent consultants and best-practice on the design of performance-related remuneration.

The terms of reference for the Remuneration Committee are maintained on the websites of the Company and the Stock Exchange.

The Remuneration Committee is satisfied that the Company's pay and employment conditions for both directors and non-Board employees around the world are appropriate to the various markets in which the Group operates. Further details of the Group's remuneration policy and practices in 2019 are set out in a letter from the Remuneration Committee Chairman below.

The Remuneration Committee held two meetings in 2019 and the attendance of Committee members is set out in the table on page 69.

A letter from the Chairman of the Remuneration Committee

Dear Shareholder,

On behalf of the Board and the Remuneration Committee, I present the IRC 2019 Remuneration Report.

We have maintained the 2018 format and content of the Remuneration Report to provide a clear explanation of our rationale for determining remuneration policy, annual awards and longer-term incentives, a format that we believe is:

- clear and transparent;
- conforms to Hong Kong requirements; and
- in line with best practice in the international markets.

Consistent with previous years, the Remuneration Committee has considered and determined all elements of remuneration solely in the context of assessing the Group's achievements and, where relevant, individual performance on a standalone basis during 2019.

Our remuneration policy continues to aim to attract, retain and motivate the high-performing individuals we rely on to deliver our business strategy and create long-term value. We believe that performance-related pay should incentivise exceptional performance and that rewards should be closely linked to and commensurate with performance. As a result, performance-related pay represents a significant portion of total pay for directors and senior management.

For executive directors, "at risk" performance-related pay typically represents more than 50% of total available remuneration. We measure performance against a broad range of health and safety, sustainability, financial and operational criteria. We benchmark our remuneration against the global mining industry and our primary peer group, as well as global companies. Further details regarding our remuneration policy are set out in the following pages. It is the Remuneration Committee's intention to continue to apply this remuneration policy in the future for as long as IRC remains an independent, listed company.

In 2015 an aggressive cost saving approach was taken by reducing salaries and directors' fees (as applicable) for all Board members by 15%, which also applied to most members of senior management of the Group. A further 10% reduction in salaries and directors' fees (as applicable) for Board members and most members of senior management was implemented in January 2016. In light of K&S commencing commercial production and the recovery in the commodities market, in September 2017, the reduced salaries and directors' fees were partially restored. The 2019 remuneration level was about 10% to 15% below the original level in 2015. Apart from a performance bonus paid to an Executive Director, no bonuses were paid to other directors in 2019.

The Remuneration Committee reviewed the vesting conditions of the employee share options that were granted in 2017 and had decided to vest 43,200,000 options to the grantees, of which 6,200,000 options were vested to each of two executive directors. 43,200,000 share options and 24,800,000 share options were written off and forfeited respectively in 2019.

Full details regarding the above activities are set out below.

Members

The Remuneration Committee is chaired by Jonathan Eric Martin Smith and its other members are Chuang-fei Li and Daniel Rochfort Bradshaw, all of whom are Independent Non-Executive Directors. Details of the Remuneration Committee's role, meetings and activities can be found on page 60 under the heading "Remuneration Committee".

The Remuneration Committee receives advice on pay and conditions across the Group from the Chairman and Chief Executive of IRC although they do not attend all meetings of the Remuneration Committee. An independent certified public accountant firm provided independent advice to the Remuneration Committee on certain areas of executive remuneration, if required. Norton Rose Fulbright provided legal advice on incentive plan rules (as well as providing legal advice to the Group).

Remuneration policy

Our remuneration policy and practices aim to attract, retain and motivate the high-performing individuals we rely on to deliver our business strategy and create long-term value. We believe that performance-related pay should incentivise exceptional performance and that rewards should be closely linked to and commensurate with performance. As a result, for 2019, the remuneration of individuals within the Group have been determined on the following basis:

1. Over 50% of the potential executive pay package is performance-related and therefore "at risk" (i.e. the contractual obligation to pay is dependent on satisfaction of performance criteria).

2. For exceptional performance, potential pay levels are positioned in the upper quartile in comparison to the global mining industry.

3. Performance is assessed on a holistic basis, taking into account a wide variety of factors that are aligned to the delivery of superior long-term returns to IRC's shareholders and continuous and sustainable improvements in the underlying operating and financial performance of IRC.

   – Individual performance criteria for annual bonus awards reflect health and safety, environment and sustainability performance; financial performance in both absolute and relative terms; and the effective delivery of strategic priorities including the project pipeline, and various lead performance indicators. The use of multiple factors ensures that bonuses cannot be earned on the basis of inappropriate or risky behaviour and avoids rewarding achievements against one or narrow objectives that come at the expense of performance in other areas.

   – The value of long-term incentives is dependent upon the performance of the Group and vesting is subject to the satisfaction of stretching performance conditions. In the event that performance is below the relevant threshold, participants will receive no benefit from long-term incentives.

4. Pay arrangements are intended to remain in place, so far as is practicable, throughout the business cycle. We have therefore avoided making frequent changes to incentive arrangements or performance metrics. In determining policy and practice, the key factors we take into account include:

   – the Listing Rules;

   – the code provisions set out in the CG Code;

   – the competitive environment for experienced personnel in the global extractive industries sector;

   – the guidance provided by a number of institutional investor representative bodies; and

   – feedback received from shareholders.

We also take into account pay and employment conditions across IRC when setting the remuneration of the Chairman and the Executive Directors. We do not believe a ratio comparison between the Executive Directors and non-Board employees is appropriate. A ratio comparison does not provide a useful measure of fairness or balance due to the vastly different costs of living in the countries where we have operations and fluctuations in exchange rates. However, we regularly assess the fairness and balance of our remuneration policies and practices internally and also benchmark them against our competitors in the various regions in which we operate.

Base salary

Purpose	– Attract and retain talented and experienced executives from an industry in which there is competition for talent.
	– Reflect the individual's capabilities and experience.
	– Reward leadership and direction of IRC on behalf of shareholders.
Policy	– Reviewed annually.
	– Set at a competitive level benchmarked against other global mining and major Hong Kong companies using independent external data.
	– Consider the individual's skills, experience and influence over, and responsibility for, the success of the business.
	– The impact of any salary increase awarded on the value of the total package is considered carefully prior to any change being made.
	– Ensure that our approach to pay is consistent across the levels of management.
Link to strategy	– Protect and generate shareholder value through the retention and attraction of high-calibre individuals.
Risk management	– Enhance retention of key personnel to ensure business continuity.
	– Structured and policy-driven approach to conducting salary reviews.

Salary review for 2019

A reduction in salary or directors' fees (as applicable) of 15% was implemented for all Directors in March 2015. A further 10% reduction was introduced in January 2016. In light of K&S commencing commercial production and the recovery in the commodities market, in September 2017, the reduced salaries and directors' fees were partially restored. The 2019 remuneration level was about 10% to 15% lower than the original level in 2015.

	For the year ended 31 December					
		2019			2018	
US$'000	Director's fees	Salaries and other benefits	Total	Directors' fees	Salaries and other benefits	Total
Executive Directors						
Yury Makarov	–	708	708	–	708	708
Danila Kotlyarov	–	752	752	–	612	612
Non-Executive Directors						
Peter Hambro (a,b)	175	–	175	42	–	42
Cheng Chi Kin	90	–	90	90	–	90
George Jay Hambro (c)	–	–	–	185	–	185
Independent Non-Executive Directors						
Daniel Rochfort Bradshaw (d)	140	–	140	126	–	126
Simon Murray	90	–	90	90	–	90
Jonathan Eric Martin Smith (a)	126	–	126	126	–	126
Chuang-fei Li	126	–	126	126	–	126
Raymond Woo	90	–	90	90	–	90
	837	1,460	2,297	875	1,320	2,195

(a) Director's fee was paid to an independent service company which is classed as an affiliated company of the director.

(b) Appointed as Non-Executive Director on 26 July 2018 and as Chairman on 19 December 2018.

(c) Retired as Non-Executive Chairman on 19 December 2018. Certain amounts included in director's fee were paid to an independent service company providing management services to IRC that is consequently classed as an affiliated company of the director.

(d) Appointed as Deputy Chairman on 5 January 2018.

Executive Committee Bonus Plan

Purpose

– Align executives' interests with the short-term goals of IRC and the drivers of the Group's long-term success.

– Reward the delivery of shareholder value through the effective execution of strategy, the profits delivered to shareholders and lead indicators of future success including safety and environmental sustainability.

Policy

– Maximum bonus awarded for truly exceptional performance is 100% of salary.

– The overall bonus pool is determined according to budgeting analysis.

– Individual payments are determined with respect to a range of key financial and non-financial metrics. These metrics include health and safety, employee development, environment and sustainability, profit and cash generation, volume and project execution.

Link to strategy

– Provides alignment among the executives' interests, the short-term financial success of IRC and the creation of shareholder value.

– The Remuneration Committee takes a comprehensive view of an appropriate level of award for each individual to ensure that bonus awards truly reflect IRC's performance and management's impact on this (rather than purely resultant from external market and cyclical factors).

Risk management – Bonus pool analysis alongside budgeting ensures affordability.

– Focus on a wide range of financial and non-financial metrics ensures that bonus rewards sustainable, holistic performance.

– Bonus analysis alongside entire remuneration package, with particular reference to the long – term incentive arrangements (further details below), ensures a focus on long-term sustainable performance and aligns management interest with shareholders.

– Determination process takes account of the extent to which performance has been driven by management activity and planning as opposed to external market and cyclical factors and response to events that were not anticipated at the start of the year.

Bonus review for 2019

Apart from a performance bonus paid to an Executive Director, no bonuses were paid to other directors in 2019.

Long-term incentive arrangements

Purpose – Align the financial interests of executives with those of shareholders.

– Incentivise the creation of shareholder value through the absolute performance of the Company and its assets as well as the recognition of such value creation in the public markets.

– Provide a focus on long-term, sustainable performance.

Policy – Share options are granted to high-performing/high potential individuals.

– Vesting is dependent upon pre-determined targets that focus on “Operations”, “Development”, “Profitability” and “Health, Safety and Environment”, normally over a three-year period, as set out below.

Link to strategy – Vesting conditions are aligned with strategic direction of shareholder value creation.

Risk management – Share based incentives ensure a focus on long-term sustainable performance and align management interests with shareholders.

The Company adopted a share option scheme pursuant to Chapter 17 of the Listing Rules on 20 November 2015 (the "Share Option Scheme") which is valid and effective for a period of 10 years from the date of adoption. Any employee, director and any person or entity acting in their capacities as consultants of the Group ("Eligible Persons") may be granted share options under the Share Option Scheme.

The Share Option Scheme is designed to incentivise, reward and retain key Eligible Persons in the Group by providing a reward for long term performance of the Eligible Persons and of the Group, and which aligns the interests of the Eligible Persons with those of the Company's long term shareholders. The Eligible Persons will only benefit from the Share Option Scheme if they satisfy certain conditions, including remaining with the Group for a minimum number of years.

Under the Share Option Scheme, the Remuneration Committee will from time to time propose to the Board for approval the grant of share options and the number of share options to be granted to the relevant Eligible Persons. The subscription price shall be determined by the Board and notified to an Eligible Person. Performance targets, if any, will be determined by the Board and be stated in the offer. Whether such targets have been successfully achieved will be decided by the Board. The Board may also determine a minimum period of time for which an option must be held before it can be exercised (the "vesting period"). Further details of the Share Option Scheme are set out in note 31 to the Consolidated Financial Statements.

A batch of share options was granted in 2017, and the vesting of these options is conditional upon the achievement of certain performance targets during the vesting period. The exercise price of the share options is HK$0.2728, which is higher than the closing share price of the Company as of 31 December 2019 of HK$0.118. 12,400,000 options were due to vest to each of Yury Makarov and Danila Kotlyarov in 2019. After assessing the level of achievement of the performance targets, the Board has decided to vest 6,200,000 options to each of the aforesaid two directors and to write off the remaining 6,200,000 options for each of these directors. As George Jay Hambro retired as Non-Executive Chairman on 19 December 2018, his entitlement of share options of 24,800,000 is forfeited and the options are being written off.

The share options vested to the directors in 2019 are summarised in the table below.

	Number of share options									Exercise price HK$
	Granted	Vested in		Written off in		Unvested as of 31 Dec		Exercised in		
		2018 or before	**2019**	2018 or before	**2019**	2018	**2019**	2018	**2019**	
Share options granted in 2017										
George Jay Hambro (a)	37,200,000	10,850,000	**–**	1,550,000	**24,800,000**	24,800,000(b)	**–**	–	**–**	0.2728
Yury Makarov	37,200,000	10,850,000	**6,200,000**	1,550,000	**6,200,000**	24,800,000	**12,400,000**	–	**–**	0.2728
Danila Kotlyarov	37,200,000	10,850,000	**6,200,000**	1,550,000	**6,200,000**	24,800,000	**12,400,000**	–	**–**	0.2728

a) The options were granted to an independent service company providing management services to IRC that is consequently classed as an affiliated company of the director.

b) George Jay Hambro retired as Non-Executive Chairman on 19 December 2018 and his entitlement of share options of 24.8 million is forfeited and the share options are being written off.

When implementing the share options scheme, the Remuneration Committee commissioned one of the leading firms of certified public accountants to conduct an independent review of the Share Option Scheme. It is considered that the Share Option Scheme motivates grantees to achieve challenging yet realistic targets, which are crucial in adding significant value to the Company and are in the best interest of IRC shareholders. The certified public accountants firm concluded that the Share Option Scheme is well designed to attract, retain and incentivise grantees.

Retirement benefits

The Executive Directors participate in plans which provides retirement benefit. IRC makes contributions to the plans on behalf of the executive directors which are assessed annually by the Remuneration Committee.

	For the year ended 31 December	
US$'000	**2019**	2018
Yury Makarov	**89**	89
Danila Kotlyarov	**10**	2
	99	91

Approved by the Board and issued on its behalf by

Jonathan Eric Martin Smith
Remuneration Committee Chairman

27 March 2020

NOMINATION COMMITTEE

The Nomination Committee is chaired by the Non-Executive Chairman of IRC, Peter Hambro. Its other members are Daniel Rochfort Bradshaw and Jonathan Eric Martin Smith, both are Independent Non-Executive Directors. The Committee meets at least once a year.

The Nomination Committee is responsible for formulating policy and making recommendations to the Board on nominations and appointment of Directors as well as on the diversity and succession of the Board. The Committee develops selection procedures for candidates, and will consider different criteria including appropriate professional knowledge and industry experience, as well as consult external recruitment professionals when required. The Board, through the Nomination Committee, has also adopted a board diversity policy which sets out the approach taken to diversify the members of the Board. The Company seeks to achieve board diversity through the consideration of a number of factors, including but not limited to gender, age, cultural and educational background, ethnicity, professional experience, skills, knowledge and length of service. The Committee reviewed the appropriateness of an express diversity quota or measurable objective and concluded that it was unnecessary. Ultimately, all board appointments are based on merit and candidates are considered against objective criteria, but due regard is given for the benefits of a diverse Board.

The Committee also reviews the size, structure and composition of the Board and assesses the independence of the Independent Non-Executive Directors. The Committee is provided with sufficient resources enabling it to perform its duties and it can seek independent professional advice at the Company's expense if necessary. The terms of reference for the Nomination Committee are maintained on the websites of the Company and the Stock Exchange.

During 2019, the Committee met once and the attendance of Committee members is set out in the table on this page.

HEALTH, SAFETY AND ENVIRONMENT COMMITTEE

The Health, Safety and Environment Committee consists of three Independent Non-Executive Directors – Daniel Rochfort Bradshaw (Chairman), Jonathan Eric Martin Smith and Chuang-fei Li, and is responsible for evaluating the effectiveness of the Group's policies and systems for identifying and managing health, safety and environmental risks within the Group's operations and for ensuring compliance with health, safety and environmental regulatory requirements. The Committee also assesses the performance of the Group with regards to the impact of health, safety, environmental and community relations, decisions and actions.

The Committee provides the Board with regular updates to assist in overseeing matters relating to enhancing the Company's global reputation of responsible corporate stewardship, conscientious corporate social responsibility and product sustainability. In doing so, professional advice may be sought if considered necessary. The Committee also has the authority to invite key members of operational management to meetings to discuss the performance of the Group.

For the year ended 31 December 2019, the Committee met once and the attendance of Committee members is set out in the table below.

BOARD AND COMMITTEE MEETINGS AND ATTENDANCE

The number of meetings the Board and other Committees scheduled during 2019 is shown below together with attendance details:

	Meeting attended/Held					
	Board	Audit Committee	Remuneration Committee	Nomination Committee	Health, Safety and Environment Committee	2019 AGM
Chairman and Non-Executive Director						
Peter Hambro	6/6	-	-	1/1	-	1/1
Deputy Chairman and Independent Non-Executive Director						
Daniel Rochfort Bradshaw	6/6	2/2	2/2	1/1	1/1	1/1
Executive Directors						
Yury Makarov	6/6	-	-	-	-	1/1
Danila Kotlyarov	6/6	-	-	-	-	1/1
Non-Executive Directors						
Patrick Cheng	6/6	-	-	-	-	1/1
Independent Non-Executive Directors						
Simon Murray	2/6	-	-	-	-	0/1
Jonathan Eric Martin Smith	6/6	2/2	2/2	1/1	1/1	1/1
Chuang-fei Li	5/6	2/2	2/2	-	1/1	1/1
Raymond Woo	6/6	-	-	-	-	1/1

DIVIDEND POLICY

When considering whether to pay any dividend, the Board looks at a range of factors, including the macro environment, the current balance sheet, future investment plans and capital requirements. The Company typically considers paying annual dividends on the basis of its results for the previous year. The dividend policy of the Company aims to provide for a regular and sizeable dividend flow to its shareholders whilst allowing the Company to maintain the financial flexibility to take advantage of attractive investment opportunities in the future.

AUDITORS' INDEPENDENCE AND REMUNERATION

Independence of the auditors is of critical importance to the Audit Committee, the Board and shareholders. The auditors write annually to the members of the Audit Committee confirming that they are independent accountants within the meaning of the Code of Ethics for Professional Accountants issued by the Hong Kong Institute of Certified Public Accountants and that they are not aware of any matters which may reasonably be thought to bear on their independence. The Audit Committee assesses the independence of the auditors by considering and discussing each such letter (and having regard to the fees payable to the auditors for audit and non-audit work) at a meeting of the Committee.

The Auditors' Report to the shareholders states the auditors' reporting responsibilities.

Fees for services rendered by the auditors to the Group for the year ended 31 December 2019 and the comparative figures for the year ended 31 December 2018 are set out below:

	For the year ended 31 December	
US$'000	**2019**	2018
Audit	**516**	510
Non-audit	**–**	–
	516	510

SHAREHOLDER RELATIONS

The Board has established a shareholders' communication policy which sets out the principles of the Company in relation to shareholders' communications, with the objective of ensuring that its communications with the shareholders are timely, transparent, accurate and open. Information is communicated to the shareholders mainly through the Company's corporate communications (such as quarterly trading updates, interim and annual reports, announcements and circulars), at the annual general meetings ("AGM") and other general meetings, as well as disclosure on the website of the Company.

Interim reports, annual reports and circulars are sent to the shareholders in a timely manner and are also available on the website of the Company. The Company's website provides shareholders with corporate information, such as its principal business activities and major projects, the corporate governance practices of the Group and the corporate social responsibilities of the Group. For efficient communication with shareholders and in the interest of environmental protection, arrangements are in place which allow shareholders to elect to receive corporate communications of the Company by electronic means through the Company's website.

Shareholders are provided with contact details of the Company, such as telephone, fax number, email address and postal address, in all communications to shareholders and on the Company's website which enable them to make any query that they may have with respect to the Company. They can also send their enquiries to the Board through these means, ensuring that shareholders' views are communicated to the Board. The Company's AGM also allows the Directors to meet and communicate directly with shareholders.

In addition, shareholders can contact Tricor Investor Services Limited, the share registrar of the Company, if they have any enquiries about their shareholdings and entitlements to dividend.

AGM proceedings are reviewed from time to time to ensure that the Company follows good corporate governance practices. The notice of AGM is distributed to all shareholders prior to the AGM and the accompanying circular also sets out details of each proposed resolution and other relevant information as required under the Listing Rules. For each separate issue to be considered at the AGM, separate resolutions are proposed by the chairman of the AGM. The chairman of the AGM exercises his power under the Articles of Association of the Company to put each proposed resolution to the vote by way of a poll. The procedures for demanding and conducting a poll are explained at the meeting prior to the polls being taken. Voting results are posted on the Company's website the next business day after the day of the AGM.

The most recent AGM was held on 19 June 2019 and the attendance of the directors is set out in the table on page 69. At the AGM, separate resolutions were proposed for each issue and were voted on by poll. All resolutions proposed at the AGM were passed. The matters discussed and the percentage of votes cast in favour of the resolutions were:

Matters being voted upon	Votes
To receive and consider the reports of the Directors and the Auditor together with the Statement of Accounts for the year ended 31 December 2018.	99.99%
To re-appoint Messrs Deloitte Touche Tohmatsu as Auditor and authorise the Board of Directors to fix the remuneration.	99.99%
To elect Mr Peter Charles Percival Hambro as Non-Executive Director.	99.85%
To re-elect Mr Danila Kotlyarov as Executive Director.	99.86%
To re-elect Mr Daniel Rochfort Bradshaw as Independent Non-Executive Director.	99.99%
To re-elect Mr Raymond Kar Tung Woo as Independent Non-Executive Director.	99.88%

Matters being voted upon	Votes
To give a general mandate to the Directors to repurchase shares in the Company not exceeding 10% of the number of Shares of the Company in issue.	99.99%
To give a general mandate to the Directors to issue, allot and deal with additional shares in the Company not exceeding the sum of 20% of the number of Shares of the Company in issue.	96.78%
To add shares repurchased to the general mandate to issue new shares.	96.78%

SHAREHOLDERS' RIGHTS

Procedures for convening a general meeting

Shareholder(s) holding at least 5% of the total voting right of the Company of all the shareholders having a right to vote at general meetings may, in accordance with the requirements and procedures set out in Companies Ordinance (Chapter 622 of the Laws of Hong Kong) (the "Companies Ordinance"), request the Board to convene a general meeting by requisition, by stating the general nature of the business to be dealt at a general meeting and depositing the signed requisition at the registered office of the Company for the attention of the Company Secretary in hard copy form.

Procedures for putting forward proposals at an annual general meeting

(i) Shareholder(s) representing at least 2.5% of the total voting rights of all shareholders of the Company who have a right to vote on the resolution at the annual general meeting; or (ii) at least 50 shareholders who have a right to vote on the resolution at the annual general meeting may request the Company to circulate a notice of a resolution for consideration at the annual general meeting. The request must identify the resolution to be moved at the annual general meeting and must be authenticated by the relevant shareholder(s) and sent to the Company in hardcopy form or in electronic form not later than six weeks before the relevant annual general meeting to which the requests relate; or if later, the time at which notice is given of that meeting.

The detailed procedures for shareholders to convene and put forward proposals at an AGM or other general meeting, including proposing a person other than a retiring director for election as a director, are set out on the Company's website. Shareholders may send their enquiries requiring the Board's attention to the Company at the registered address of the Company.

Constitutional document

Rights of the shareholders are also provided under the Articles of Association. There have been no changes to the company's constitutional document during the year.

COMPLIANCE WITH CORPORATE GOVERNANCE CODE AND MODEL CODE

Throughout the year, the Company has complied with the code provisions set out in the Corporate Governance Code as stated in Appendix 14 to the Rules Governing the Listing of Securities (the "Listing Rules") on The Stock Exchange of Hong Kong Limited except that the Independent Non-Executive Director, Mr. Simon Murray, *CBE, Chevalier de la Légion d'Honneur* was unable to attend the annual general meeting of the Company held on 19 June 2019 as provided for in code provision A.6.7 as he had overseas engagements.

The Company has adopted the Model Code for Securities Transactions by Directors of Listed Issuers set out in Appendix 10 to the Listing Rules (the "Model Code"). The Company has made specific enquiry of all the Directors regarding any non-compliance with the Model Code during the year and they have confirmed their full compliance with the required standard set out in the Model Code.

The Company has also adopted the Model Code as the Code for Securities Transactions by Relevant Employees to regulate dealings in securities of the Company by certain employees of the Company, or any of its subsidiaries and holding companies, who are considered to be likely in possession of inside information in relation to the Company or its securities. The Company has internal controls for handling and dissemination of inside information whereby the Chairman of the Board, the Chief Financial Officer and the Company Secretary work closely, seeking advice from legal advisors from time to time, if needed, with proper reporting of and approval from the Board, for proper handling and dissemination of inside information in accordance with relevant laws and regulations.

DIRECTORS' RESPONSIBILITY STATEMENT

The Board acknowledges its responsibility to ensure that sound and effective internal control systems are maintained so as to safeguard the Group's assets and the interests of shareholders. The Company improves its business and operational activities by identifying the areas of significant business risks via a regular review and taking appropriate measures to control and mitigate these risks. The management identifies the risk areas and reviews all significant control policies and procedures and highlights all significant matters to the Board and Audit Committee annually. The internal control system is designed to provide reasonable, but not absolute, assurance against material misstatement or loss. Where necessary, independent consultants are hired to assist the Board to perform a high-level risk assessment of the Group, which entails identifying, analysing and assessing key risks faced by the Group. The Board has reviewed the effectiveness of the risk management and internal control systems and considers the risk management and internal control systems effective and adequate.

The directors of the Company are responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with Hong Kong Financial Reporting Standards issued by the Hong Kong Institute of Certified Public Accountants (the "HKICPA") and the Hong Kong Companies Ordinance. The Group's annual results and interim results are announced in a timely manner, and the consolidated financial statements of the Group and the Independent Auditor's Report is set out at page 86.

On behalf of the Board

Peter Hambro
Chairman

27 March 2020

DIRECTORS' REPORT

The Directors present their Report together with the audited consolidated financial statements of the Company and its subsidiaries (collectively referred to as the "Group") for the year ended 31 December 2019.

PRINCIPAL ACTIVITIES

The Company was incorporated with limited liability in Hong Kong on 4 June 2010 under the Hong Kong Companies Ordinance. The principal activity of the Company is investment holding and the principal activities of its subsidiaries, associates and jointly controlled entity are the production and development of industrial commodities products.

The analysis of the principal activities and geographical locations of the operation of the Group for the year ended 31 December 2019 is set out in note 6 to the consolidated financial statements.

BUSINESS REVIEW AND PERFORMANCE

A fair review of the business of the Company is provided in the Chairman Statement, CEO and CFO Statement & Results of Operations on pages 3 and 7 respectively. Discussion and analysis of the Group's performance during the year and the material factors underlying its results and financial position and particulars of important events affecting the Group that have occurred since the end of the financial year are provided throughout this Annual Report, particularly in the CEO and CFO Statement & Results of Operations section on pages 7 to 17. Descriptions of the principal risks and uncertainties facing the Group can be found throughout this Annual Report, particularly in the Risk Factors section on pages 183 to 186. The future development of the Company's business is discussed throughout this Annual Report including in the Chairman Statement as well as the CEO and CFO Statement on pages 3 and 7 respectively. An analysis of the Group's business and operations using financial key performance indicators can be found in the Key Performance Indicators section on pages 18 to 19 while an account of the Company's key relationships with its employees, customers and suppliers and others that have a significant impact on the Company and on which the Company's success depends is provided throughout this Annual Report, particularly in the Remuneration Committee section of the Corporate Governance Report on pages 58 to 72 and the Directors' Report on pages 73 to 82. In addition, details regarding the Group's performance by reference to environmental and social-related key performance indicators and policies, as well as compliance with relevant laws and regulations which have a significant impact to the Group, are provided in the Environmental, Social and Governance section on pages 33 to 57.

DIVIDEND

The Board does not recommend the distribution of a dividend for the year ended 31 December 2019.

PROPERTY, PLANT AND EQUIPMENT

Details of the movements in property, plant and equipment during the year ended 31 December 2019 are set out in note 17 to the consolidated financial statements.

SHARE CAPITAL

There were no changes in the share capital of the Company in 2019.

RESERVES

Details of reserves available for distribution and movements in reserves during the year are set out in the section "Consolidated Statement of Changes in Equity" of the consolidated financial statements.

DIRECTORS

The Directors during the year and up to the date of this report were:

Chairman and Non-Executive Director:

Peter Hambro

Deputy Chairman and Independent Non-Executive Director:

Daniel Rochfort Bradshaw

Executive Directors:

Yury Makarov
Danila Kotlyarov*

Non-Executive Director:

Patrick Chi Kin Cheng**

Independent Non-Executive Directors:

Simon Murray, *CBE, Chevalier de la Légion d'honneur****
Jonathan Eric Martin Smith
Chuang-fei Li
Raymond Woo
Martin Joseph Davison ****

* Danila Kotlyarov was re-designated as Non-Executive Director on 1 February 2020.

** Patrick Chi Kin Cheng retired as Non-Executive Director on 20 March 2020 but remains as a consultant for a period of six months from 20 March 2020.

*** Simon Murray, CBE, Chevalier de la Légion d'honneur retired as Independent Non-Executive Director on 20 March 2020.

**** Martin Joseph Davison was appointed as Independent Non-Executive Director on 20 March 2020.

DIRECTORS' SERVICE CONTRACTS

The Company has entered into letters of appointment with each of its Directors, pursuant to which each Director is appointed for a term of three years and is subject to termination in accordance with their respective terms.

No Director proposed for re-election at the 2019 AGM has a service contract with the Company which is not determinable by the Company within one year without payment of compensation (other than statutory compensation).

DIRECTORS OF SUBSIDIARIES

The list of directors who have served on the board(s) of the subsidiaries of the Company during the year and up to the date of this report are shown on the Company's website.

PERMITTED INDEMNITY PROVISIONS

During the financial year and up to the date of this Report, the Company has in force indemnity provisions as permitted under the relevant statutes for the benefit of the Directors of the Company or its associated companies. The permitted indemnity provisions are provided for in the Company's Articles of Association and in the directors and officers liability insurance maintained for the Group in respect of potential liability and costs associated with legal proceedings that may be brought against such Directors.

DIRECTORS' INTERESTS

As at 31 December 2019, the interests or short positions of the Directors of the Company in the shares, underlying shares and debentures of the Company or any of its associated corporations (within the meaning of Part XV of the Securities and Futures Ordinance ("SFO") which were notified to the Company and the Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO (including interests or short positions which they were taken or deemed to have under such provisions of the SFO), or which were recorded in the register required to be kept by the Company under Section 352 of the SFO, or which were required, pursuant to the Model Code, to be notified to the Company and the Stock Exchange, were as follows:

Long positions in shares of the Company

Name of director	Nature of interest	Number of shares in the Company	Percentage of issued shares in the Company at 31 December 2019
Peter Hambro	Beneficial interest	15,330,000	0.22%
Yury Makarov	Beneficial interest	30,911,505	0.44%
	Contingent beneficial interest*	53,851,086	0.76%^
Raymond Kar Tung Woo	Beneficial interest	7,435,360	0.10%
Danila Kotlyarov	Contingent beneficial interest*	53,851,086	0.76%^
Chi Kin Cheng	Contingent beneficial interest**	60,000,000	0.85%^

* The interest relates to the share options granted by the Company on 20 November 2015 and on 29 September 2017. Details of the share option scheme are set out on page 159 of the 2019 Annual Report of the Company under the heading "SHARE-BASED PAYMENTS TRANSACTIONS".

** The interest relates to the share options granted by the Company on 30 December 2016. Details of the share options are set out on page 151 of the 2019 Annual Report of the Company under the heading "SHARE CAPITAL".

^ These percentages are calculated on the basis of 7,093,386,381 Shares in issue as at 31 December 2019

Long positions in shares of an associated corporation

As at 31 December 2019, Peter Hambro, Non-Executive Director, and Yury Makarov, Executive Director, beneficially hold 20,450,395 shares and 75,278 shares of Petropavlovsk PLC ("Petropavlovsk") respectively. Petropavlovsk, through its wholly-owned subsidiary Cayiron Limited, is a substantial shareholder of the Company, and accordingly an associated corporation of the Company.

DIRECTORS' INTERESTS IN COMPETING BUSINESSES

Except as described below, none of the Directors of the Company or their respective associates was interested in, apart from the Group's businesses, any business which competes or is likely to compete, either directly or indirectly, with the businesses of the Group.

Petropavlovsk, a substantial shareholder of the Company, and its subsidiaries (the "Petropavlovsk Group") are principally engaged in the exploration, development and production of precious metal deposits in Russia. The Directors do not consider Petropavlovsk to be a competitor of the Company because Petropavlovsk focuses on different commodities to the Company.

DIRECTORS' INTERESTS IN CONTRACTS

No Director or an entity connected with a Director had a material interest, either directly or indirectly, in any transaction, arrangement or contract of significance to the business of the Group to which the Company or any of its subsidiaries was a party during the year ended 31 December 2019.

APPOINTMENT OF INDEPENDENT NON-EXECUTIVE DIRECTORS

The Company has received, from each of the independent non-executive directors, an annual confirmation of his independence pursuant to Rule 3.13 of the Listing Rules. The Company considers all of the independent non-executive directors are independent.

SUBSTANTIAL SHAREHOLDERS' AND OTHER PERSONS' INTERESTS

So far as is known to any Director or chief executive of the Company, as at 31 December 2019, the Company's shareholders (other than Directors or chief executives of the Company) who had interests or short positions in the shares or underlying shares of the Company which would fall to be disclosed to the Company under the provisions of Divisions 2 and 3 of Part XV of the SFO, or which were recorded in the register required to be kept by the Company as under Section 336 of the SFO were as follows:

Name of director	Capacity	Number of shares in the Company	Percentage of issued shares in the Company as at 31 December 2019
Petropavlovsk PLC	Interest of a controlled corporation	2,205,900,000	31.10%
Cayiron Limited*	Beneficial interest	2,205,900,000*	31.10%

* Cayiron Limited is a wholly owned subsidiary of Petropavlovsk PLC.

Save as disclosed above and those disclosed under "Directors' Interests", the Company had not been notified of other interests representing 5% or more of the issued share capital of the Company as at 31 December 2019.

PURCHASE, SALE OR REDEMPTION OF THE COMPANY'S LISTED SECURITIES

During the year, neither the Company nor any of its subsidiaries has purchased, sold or redeemed any of the Company's listed securities. As at 31 December 2019, the Company had not been notified of any short positions being held by any substantial shareholder in shares or underlying shares of the Company, which are required to be recorded in the register required to be kept under Section 336 of Part XV of the Securities and Futures Ordinance.

CONTINUING CONNECTED TRANSACTIONS

Pursuant to Chapter 14A of the Listing Rules, the following non-exempt continuing connected transactions require disclosure in the annual report of the Company:

US$'000 Continuing connected transactions		Connected Persons	Cap for 2019	Actual amount for 2019
A	Shared Services Agreement	Petropavlovsk and/or its subsidiaries	2,035	42
B	Technical Services Agreement	Petropavlovsk and/or its subsidiaries	4,500	–
C	Helicopter Lease Agreement	Petropavlovsk and/or its subsidiaries	1,000	308
D	Helicopter Services Agreement	Petropavlovsk and/or its subsidiaries	2,000	–
			9,535	350

The actual amount of these transactions did not exceed the respective caps.

The connected transactions described in items A to D concern transactions between the Group and Petropavlovsk. Petropavlovsk, through its wholly-owned subsidiary Cayiron Limited, is a substantial shareholder of the Company and therefore a connected person pursuant to Listing Rule 14A.07(1). Furthermore, Petropavlovsk's subsidiaries are also connected persons of the Company as they are associates of Petropavlovsk. Accordingly, transactions between the Group and Petropavlovsk, and between the Group and Petropavlovsk's subsidiaries, are connected transactions for the purpose of Chapter 14A of the Listing Rules.

A. Shared Services Agreement

The Group procures certain services from Petropavlovsk, and provides certain services to Petropavlovsk ("Shared Services"). On 29 September 2010, the Company and Petropavlovsk entered into an agreement in respect of Shared Services (the "Shared Services Agreement") for a term of three years. The Shared Services Agreement is intended to provide an overarching framework for provision of the shared services. The Shared Services comprise: (i) shared office space; (ii) legal services; (iii) management and information technology services; (iv) administrative services and (v) an equipment lease. Except for (v) an equipment lease, which is charged on arm's length terms, all other services are recharged on a "cost plus a markup of 10%" basis.

On 21 December 2012, the Shared Services Agreement was first renewed for a term of three years commencing from 1 January 2013 and ending on 31 December 2015 (the "First Renewed Shared Services Agreement"). On 5 February 2016, the Shared Services Agreement was again renewed for a term of three years commencing from 1 January 2016 and ending on 31 December 2018 (the "Second Renewed Shared Services Agreement"). On 26 March 2019, the Shared Services Agreement was renewed for a further term of three years commencing from 1 January 2019 and ending on 31 December 2021 (the "Third Renewed Shared Services Agreement"). Apart from changes made to update the effective period of renewal, all other terms and conditions of the Shared Services Agreement remain the same.

The annual cap under the Third Renewed Shared Services Agreement for the years ended 31 December 2019, 31 December 2020 and 31 December 2021 is US$2,035,000 respectively, which is the same annual cap as for the three years ended 31 December 2016, 31 December 2017 and 31 December 2018 under the Second Renewed Shared Services Agreement. The annual cap amounts have been determined based on historical transaction figures and the Group's planned operations over the next three years, with a buffer to provide flexibility for any increase in shared services required by the Group or any increase in the base cost of providing such services.

B. Technical Services Agreement

On 29 September 2010, the Group and Petropavlovsk entered into a technical services agreement (the "Technical Services Agreement") for a term of three years. The Technical Services Agreement provides an overarching agreement which governs Petropavlovsk's provision of technical services to the Group. The technical services comprise: (i) construction services; (ii) engineering & design services and (iii) exploration & geological services. The technical services were recharged on a "cost plus 10% markup" basis.

On 21 December 2012, the Technical Services Agreement was first renewed for a term of three years commencing from 1 January 2013 and ending on 31 December 2015 (the "First Renewed Technical Services Agreement"). On 5 February 2016, the Technical Services Agreement was again renewed for a term of three years commencing from 1 January 2016 and ending on 31 December 2018 (the "Second Renewed Technical Services Agreement"). On 26 March 2019, the Technical Services Agreement was renewed for a further term of three years commencing from 1 January 2019 and ending on 31 December 2021 (the "Third Renewed Technical Services Agreement"). Apart from changes made to update the effective period of renewal, all other terms and conditions of the Technical Services Agreement remain the same.

The annual cap under the Third Renewed Technical Services Agreement for the years ended 31 December 2019, 31 December 2020 and 31 December 2021 is US$4,500,000 respectively, which is the same annual cap as for the three years ended 31 December 2016, 31 December 2017 and 31 December 2018 under the Second Renewed Technical Services Agreement. The annual cap amounts have been determined based on historical transaction figures and the Group's planned operations over the three year period, with a buffer to provide flexibility for any increase in technical service required by the Group or any increase in the base cost of providing such services.

C. Helicopter Lease Agreement

LLC GMMC, a subsidiary of the Company, provides MC Petropavlovsk with helicopter services pursuant to a helicopter lease agreement ("Helicopter Lease Agreement") dated 29 September 2010. Under the Helicopter Lease Agreement, LLC GMMC leases its helicopter to MC Petropavlovsk for use in Petropavlovsk's operations. MC Petropavlovsk is a subsidiary of Petropavlovsk and therefore is a connected person of the Company for the purposes of Chapter 14A of the Listing Rules. Although the Petropavlovsk Group has its own helicopters, it is still necessary to lease helicopter from the Group because at various times its helicopters may be under repair and maintenance. This arrangement provides the Petropavlovsk Group with continuous access to a helicopter service. The terms and conditions of the Helicopter Lease Agreement are no more favourable to MC Petropavlovsk than those that would be offered to independent third parties. The Helicopter Lease Agreement has been amended and varied pursuant to a deed of variation to ensure compliance with Chapter 14A of the Listing Rules and, under the terms of the amended agreement, the amount charged to MC Petropavlovsk is calculated on the total cost, including amortisation and overheads plus a margin of 10%, attributable to actual flight time.

Before the expiry of the Helicopter Lease Agreement on 8 October 2013, the Helicopter Lease Agreement was first renewed on 16 January 2013 for a term of three years commencing from 1 January 2013 and ending on 31 December 2015 (the "First Renewed Helicopter Lease Agreement"). On 5 February 2016, the Helicopter Lease Agreement was again renewed for a term of three years commencing from 1 January 2016 and ending on 31 December 2018 (the "Second Renewed Helicopter Lease Agreement"). On 26 March 2019, the Helicopter Lease Agreement was renewed for a further term of three years commencing from 1 January 2019 and ending on 31 December 2021 (the "Third Renewed Helicopter Lease Agreement). Apart from changes made to update the effective period of renewal, all other terms and conditions of the Helicopter Lease Agreement remain the same.

The annual cap under the Third Renewed Helicopter Lease Agreement for the years ended 31 December 2019, 31 December 2020, and 31 December 2021 is US$1,000,000 respectively, which is the same annual cap for the three years ended 31 December 2016, 31 December 2017, and 31 December 2018 under the Second Renewed Helicopter Lease Agreement. The annual cap amounts have been determined based on historical transaction figures and MC Petropavlovsk's expected demand for helicopter services for the next three years, as advised to the Company by MC Petropavlovsk.

The Third Renewed Helicopter Agreement was terminated on 13 December 2019 when LLC GMMC, a subsidiary of the Company, sold the helicopter which was leased by MC Petropavlovsk pursuant to this agreement, to a subsidiary of Petropavlovsk. Further details of that sale and purchase agreement are set out on page 81.

D. Helicopter Services Agreement

On 29 September 2010, the Group and MC Petropavlovsk entered into an agreement relating to the provision of helicopter services ("Helicopter Services Agreement"). Under the agreement, MC Petropavlovsk provides the Group with the use of its helicopter, which is critical for the Group's business due to the distances between the Group's assets and offices. The reason the Group procures a helicopter service from MC Petropavlovsk is to ensure that it has continuous access to a helicopter service. This will be relevant where the Group's own helicopter is under repair and maintenance, or where the Group's personnel require an extended service. MC Petropavlovsk recharges the Group for total cost, including amortisation and overheads plus a margin of 10%, attributable to actual flight time.

Before the expiry of the Helicopter Services Agreement on 8 October 2013, the Helicopter Services Agreement was first renewed on 16 January 2013 for a term of three years commencing from 1 January 2013 and ending on 31 December 2015 (the "First Renewed Helicopter Services Agreement"). On 5 February 2016, the Helicopter Services Agreement was again renewed for a term of three years commencing from 1 January 2016 and ending on 31 December 2018 (the "Second Renewed Helicopter Services Agreement"). On 29 March 2019, the Helicopter Services Agreement was renewed for a further term of three years commencing from 1 January 2019 and ending on 31 December 2021 (the "Third Renewed Helicopter Services Agreement"). Apart from changes made to update the effective period of renewal, all other terms and conditions of the Helicopter Services Agreement remain the same.

The annual cap under the Third Renewed Helicopter Services Agreement for the years ended 31 December 2019 and 31 December 2020 and 31 December 2021 is US$2,000,000 respectively, which is the same annual cap for the three years ended 31 December 2016, 31 December 2017 and 31 December 2018 under the Second Renewed Helicopter Services Agreement. The annual cap amounts have been determined based on historical transaction figures and the Group's expected requirements for helicopter services over the next three years, having regard to the Group's planned activities in areas that are only accessible by helicopter.

Each Continuing Connected Transaction has been reviewed by the Directors, including the Independent Non-executive Directors. The Directors confirm that the Continuing Connected Transactions set out above have been entered into:

– in the ordinary and usual course of business of the Group;

– on normal commercial terms or better; and

– according to the agreement governing them on terms that are fair and reasonable and in the interests of the shareholders of the Company as a whole.

Pursuant to Rule 14A.56 of the Listing Rules, the Company has engaged the auditor of the Company to perform certain work in accordance with Hong Kong Standard on Assurance Engagements 3000 "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information" and with reference to Practice Note 740 "Auditor's Letter on Continuing Connected Transactions under the Hong Kong Listing Rules" issued by the Hong Kong Institute of Certified Public Accountants (the "HKICPA").

The auditor has provided a letter to the board of directors of the Company and confirmed that for the year ended 31 December 2019 the Continuing Connected Transactions (i) have received the approval of the board of directors of the Company; (ii) are in accordance with the pricing policies of the Company for those transactions that involve provision of goods or services by the Group; (iii) have been entered into in accordance with the relevant agreement governing the transactions and (iv) have not exceeded their respective annual caps.

The Directors confirm that the Company has complied with the disclosure requirements in accordance with Chapter 14A of the Listing Rules.

Petropavlovsk is a connected party of the Group and transactions with these entities during the year ended 31 December 2019 are set out in note 37, Related Party Disclosures, to the consolidated financial statements.

One-off Connected Transaction

On 13 December 2019, LLC GMMC, a subsidiary of the Company, agreed to sell a helicopter to JSC "Pokrovskiy mine", a subsidiary of Petropavlovsk and therefore a connected person of the Company for the purposes of Chapter 14A of the Listing Rules.

The net book value of the helicopter was approximately US$5.2 million. The market value of the helicopter excluding value added tax, as determined by an independent valuer, was RUB316.7 million (equivalent to approximately US$5.1 million) and this amount was adopted as the consideration for the sale of the helicopter after arm's length negotiations between LLC GMMC and JSC "Pokrovskiy mine". It has been agreed that the consideration shall be settled in two tranches, RUB83.3 million (equivalent to approximately US$1.3 million) was settled in December 2019 and the balance was settled upon the completion of the transaction in February 2020. Petropavlovsk is a related party of the Group and the Directors confirm that the Company has complied with the disclosure requirements in accordance with Chapter 14A of the Listing Rules.

The Group entered into the disposal agreement to effect the sale of the helicopter, an asset which the Board of IRC has determined is not required for the purpose of the Group's core mining business. The disposal enabled the Group to raise capital for the purpose of funding the general working capital needs of the Group, including for the purpose of paying interest and principal amounts on loans of the Group.

EMOLUMENT POLICY

Details of the Directors' emoluments and of the five highest paid individuals in the Group are set out in note 13 to the consolidated financial statements. The emolument policy of the employees of the Group is set up by the Remuneration and/or Executive Committees on the basis of their merit, qualifications and competence.

The emoluments payable to Directors depend on their respective contractual terms under their employment contracts or service contracts as approved by the board of directors of the Company on the recommendation of the Remuneration Committee, having regard to the Company's operating results, individual performance and comparable market statistics.

Detailed information on the remuneration policy and practices of IRC in 2019 are set out in the Corporate Governance Report on page 62 under the heading "Remuneration Committee".

The key element of senior management remuneration is the Share Option Scheme, which is designed to align the interests of management with those of shareholders, and to incentivise performance. Please refer to the paragraph "Remuneration Committee" in the Corporate Governance Report on page 67 and Note 31 to the consolidated financial statements under "Share-Based Payments" for more details.

MAJOR CUSTOMERS AND SUPPLIERS

The aggregate sales attributable to the Group's three largest customers accounted for 99% of the total revenue for the year. The largest of them accounted for 49% of the total revenue. Also, the aggregate purchases attributable to the Group's three largest suppliers taken together represented 58% of the Group's total purchases for the year. The largest supplier represented 28% of the Group's total purchases for the year.

None of the Directors, their associates or any shareholder (which to the knowledge of the Directors owns more than 5% of the Company's share capital) has any interest in the Group's three largest suppliers or customers.

GUARANTEE

The Group obtained a banking facility of US$340 million from ICBC in 2010 which was guaranteed by Petropavlovsk, the substantial shareholder of the Company. In March 2019, the ICBC loan was fully repaid by utilising the proceeds from the two Gazprombank facilities for an aggregate amount of US$240 million (the "Gazprombank Facility"). The Gazprombank Facility is guaranteed by Petropavlovsk.

Petropavlovsk and IRC have entered into a New Recourse Agreement which sets out the terms on which Petropavlovsk has agreed to act as guarantor of the Gazprombank Facility. Under the New Recourse Agreement, IRC shall pay Petropavlovsk a monthly fee to be calculated by reference to a rate on the then maximum amount that may be payable by Petropavlovsk under the guarantee arrangement. IRC has agreed with Petropavlovsk that the rate of the annual monthly fee is 3.07% in respect of the guarantee arrangement for the Gazprombank Facility. IRC understands from Petropavlovsk that the rate of the monthly fee was determined by leading international financial advisers, acting as experts to Petropavlovsk to determine a rate of the monthly fee which is on normal commercial terms. An independent expert appointed by IRC has confirmed that applying such rate on Petropavlovsk's maximum potential exposure is not unreasonable.

Petropavlovsk is a connected party of the Group and guarantee fees payable to Petropavlovsk during the year ended 31 December 2019 are set out in note 37, Related Party Disclosures, to the consolidated financial statements.

CORPORATE GOVERNANCE

The Company is committed to maintaining a high standard of corporate governance practices. Information on the corporate governance practices adopted by the Company are set out in the Corporate Governance Report on page 58 of this annual report.

SUFFICIENCY OF PUBLIC FLOAT

Based on the information that is publicly available to the Company and within the knowledge of the Directors, as at the date of this report, the Company has maintained a sufficient public float as required under the Listing Rules.

AUDITOR

During the year, Messrs. Deloitte Touche Tohmatsu was appointed as the auditor of the Company. A resolution to appoint the auditor of the Company will be proposed at the forthcoming Annual General Meeting. There has been no change in auditor in the preceding 3 years.

REVIEW BY THE AUDIT COMMITTEE

The audited financial statements have been reviewed by the Audit Committee of the Company, which comprises three Independent Non-executive Directors: Chuang-fei Li, Daniel Rochfort Bradshaw and Jonathan Eric Martin Smith. Chuang-fei Li is the Chairman of the Audit Committee.

On behalf of the Board

Peter Hambro
Chairman

27 March 2020

BOARD OF DIRECTORS AND COMPANY SECRETARY

As at 31 December 2019, the Board composes of the following directors with a collective expertise covering the resource sector and complementary industries, in addition to deep experience in the geographical regions where IRC operated. The Board formally meets at least four times a year. In addition, numerous sub-committee meetings, information events and director training sessions are held, including site visits to IRC's operations and regional offices. The strategic leadership of IRC is the responsibility of a unitary and balanced board, which comprises a healthy composition of Executive Directors, Non-Executive Directors and Independent Non-Executive Directors.

NON-EXECUTIVE CHAIRMAN

Peter Charles Percival Hambro
Chairman

Mr. Hambro, 75, is the Chairman, Non-Executive Director and Chairman of Nomination Committee of IRC. He was an Executive Director and the Chairman of Petropavlovsk PLC for 23 years until June 2017. Mr Hambro was a Director of a number of public companies listed on the London Stock Exchange from 1973 to 2017 and has spent almost 40 years in the metals business. He was the Deputy Managing Director of London-based bullion trader, Mocatta and Goldsmid Limited, and served on the Mocatta Group Executive Committee. He is the Chairman of Peter Hambro Limited and founded Peter Hambro Mining PLC, now renamed Petropavlovsk PLC, with Dr Pavel Maslovskiy. Mr Hambro is also a Director of a number of unlisted family companies.

NON-EXECUTIVE DEPUTY CHAIRMAN

Daniel Rochfort Bradshaw
Deputy Chairman

Mr Bradshaw, 73, is the Deputy Chairman, Senior Independent Non-Executive Director and Chairman of the Health, Safety and Environment Committee of IRC. He worked for most of his career as a solicitor and resigned from Mayer Brown in Hong Kong in March 2019. Mr Bradshaw holds an LLB and LLM in Law. He is a Director of the Kadoorie Farm & Botanic Garden Corporation, an Independent Non-Executive Director of Pacific Basin Shipping Limited, an Independent Non-Executive Director of GasLog MLP, and a member of the Executive Council of the World Wide Fund for Nature Hong Kong.

EXECUTIVE DIRECTORS

Mr Makarov, 45, is the Chief Executive Officer and Executive Director of IRC. He began his career at NT Computers as an engineer, and later Commercial Director, with responsibility for sales, service and support. In 2002, he joined Aricom as COO and subsequently Petropavlovsk as the Group Head of Industrial Commodity Operations, before taking up his current role at IRC in 2010. Mr Makarov is a qualified systems engineer with a degree in avionics design and production from the Moscow State Aircraft Technology Institute.

Yury Makarov
Chief Executive Officer

Danila Kotlyarov
Chief Financial Officer

Mr Kotlyarov, 41, is the Chief Financial Officer and Executive Director. Mr Kotlyarov joined the Group in 2005 responsible over Russian and China operations, and was promoted to Deputy CEO in 2010 and redesignated as CFO in January 2016. Before joining IRC, he gained extensive financial management work experience in various international companies. He 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), member of Hong Kong and Russia Associations of Financial Analysts.

INDEPENDENT NON-EXECUTIVE DIRECTORS

Mr Smith, 61, is an Independent Non-Executive Director and Chairman of the Remuneration Committee. He is a partner of the specialist mining advisory firm Legacy Hill Capital. He was the founder of London based Smith's Corporate Advisory, which he sold to UK stockbroker Westhouse Holdings in 2010, where he subsequently headed the mining practice. Prior to establishing his own firm, he worked at UBS, Credit Suisse and Williams de Broe. He is a graduate from the Royal Military Academy Sandhurst where he served as an officer in the Welsh Guards until 1982. In January 2019, he became an independent Non-Executive Director and Chairman of the Audit Committee of VI Mining plc.

Jonathan Martin Smith

Chuang-fei Li

Mr Li, 73, is an Independent Non-Executive Director and Chairman of the Audit Committee. Mr Li worked for Bank of China in London as the Deputy General Manager and the Chief Lending Officer with wide responsibilities, including investment and corporate banking, treasury and capital markets, financial institutions coverage, structured finance, aircraft and shipping finance, syndications, retail banking and auditing. Mr Li is a past Fellow of the Asia Centre at Harvard University.

Mr Murray, 80, was an Independent Non-Executive Director of IRC. Mr Murray brings considerable Hong Kong and Asia based experience to the Board, from a career spanning Jardine Matheson, Hutchison Whampoa as the Group Managing Director, Executive Chairman, Asia Pacific of the Deutsche Bank Group and his current position as Chairman of GEMS Limited. Mr Murray is currently the Non-Executive Director of China LNG Group Limited and Greenheart Group Limited, and the Independent Non-Executive Director of Wing Tai Properties and Spring Asset Management Limited (the manager of Spring REIT), all of which are listed in Hong Kong.

Simon Murray
CBE, Chevalier de la Légion d'honneur

Raymond Kar Tung Woo

Mr Woo, 50, was re-designated as an Independent Non-Executive Director of IRC on 5 January 2018. Mr Woo began his career at Arthur Andersen, then an investment banker at ING, CITIC Securities and Credit Suisse. He holds a Bachelor of Commerce from The University of New South Wales and is a member of the Australian Society of Certified Practising Accountants and a fellow of the HKICPA. He is an Independent Non-Executive Director of Yuanda China and SMIT Holdings. Before being redesignated as Non-Executive Director on 25 March 2015 and then as Independent Non-Executive Director on 5 January 2018, he was the Executive Director, CFO and Company Secretary of IRC.

NON-EXECUTIVE DIRECTOR

Mr Cheng, 51, is a director of an asset management company. He is a Certified Public Accountant of HKICPA and a fellow member of the Association of International Accountants. He has over 26 years of work experience in merger and acquisition, finance & accounting, banking, asset managements & funds operations in various industries including real estate developments, infrastructure developments, real estate investment trusts (REITS), securities investments and natural resources industries.

Patrick Chi Kin Cheng

EMERITUS DIRECTOR

Dr Pavel Maslovskiy

Dr Pavel Maslovskiy, 63, a professional metallurgist, co-founded Petropavlovsk with Peter Hambro in 1994 with a single greenfield licence in the Amur region, organically expanding the business into one of Russia's largest gold mining companies. He is currently the CEO of Petropavlovsk. Prior to embarking on his business career, Dr Maslovskiy was a Professor of Metallurgy at the Moscow Aircraft Technology Institute. He is the author of more than 100 printed scientific papers, copyright certificates and co-author of various textbooks in the field of metallurgy. Dr Maslovskiy's achievements and contribution to the Russian mining industry and society has been recognised with awards from the Ministry of Education, the Administration of the President of the Russian Federation and the Administration of the Amur Region.

COMPANY SECRETARY

Mr Yuen, 47, is the Company Secretary, Corporate Controller, and Authorised Representative of the Company. Mr Yuen began his career in KPMG and has over 20 years of financial management, accounting, auditing and administration experiences, including working in various senior positions of listed companies in Hong Kong. He is a fellow member of the HKICPA and the ACCA. He holds a MBA from the Manchester Business School of University of Manchester.

Johnny Shiu Cheong Yuen

INDEPENDENT AUDITOR'S REPORT

Deloitte. 德勤

TO THE MEMBERS OF IRC LIMITED
鐵江現貨有限公司
(incorporated in Hong Kong with limited liability)

OPINION

We have audited the consolidated financial statements of IRC Limited (the "Company") and its subsidiaries (collectively referred to as the "Group") set out on pages 93 to 177, which comprise the consolidated statement of financial position as at 31 December 2019, and the consolidated statement of profit or loss, consolidated statement of profit or loss and other comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2019, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Hong Kong Financial Reporting Standards ("HKFRSs") issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA") and have been properly prepared in compliance with the Hong Kong Companies Ordinance.

BASIS FOR OPINION

We conducted our audit in accordance with Hong Kong Standards on Auditing ("HKSAs") issued by the HKICPA. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the HKICPA's Code of Ethics for Professional Accountants ("the Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matter	How our audit addressed the key audit matter
Assessment of liquidity	
We have identified the assessment of liquidity performed by the management of the Group as a key audit matter as it is dependent on the credit facilities disclosed in note 27 to the consolidated financial statements and the expected cash to be generated from operations to meet its financial obligations as they fall due for the following twelve months. The management of the Group has prepared a cash flow forecast which involves judgements and estimations based upon management's input of key variables and market conditions including the expected production capacity of the Kimkan and Sutara Project ("K&S Project"), future iron ore prices and costs of production. The cash flow forecast has been determined using estimations of future cash flows based upon projected income and expenses of the Group and its working capital needs for the next twelve months. As at 31 December 2019, the Group had net current liabilities of approximately US$50.6 million. As disclosed in the assessment of liquidity risk in note 36 to the consolidated financial statements, the Group has financial liabilities and lease liabilities of US$85.4 million to be settled within one year from 31 December 2019.	Our procedures in relation to the Group's assessment of going concern included: • Obtaining an understanding of the process over the liquidity assessment including the Group's preparation of cash flow forecasts, setting of reasonable and supportable assumptions and inputs to the model used to estimate the future cash flows for the following twelve months; • Testing the reasonableness of the inputs and assumptions used to determine the cash flow forecast against historical performance, economic and industry indicators, publicly available information such as iron ore pricing forecasts and the Group's strategic plans; • Reperforming the underlying calculations used in the Group's assessment of debt covenants compliance, the cash flow forecast and management's sensitivity testing of the inputs used; • Challenging the key assumptions including those pertaining to revenue growth of K&S Project and the timing of significant payments in management's forecast cash flows for the next 12 months;

KEY AUDIT MATTERS (CONTINUED)

Key audit matter	How our audit addressed the key audit matter
Assessment of liquidity (continued)	
The Group has bank balances and time deposits of US$4.3 million at 31 December 2019. The Group believes it has sufficient liquidity based upon the credit facilities as disclosed in note 27 to the consolidated financial statements and the expected cash generated from operations to meet its financial obligations as they fall due for the following twelve months. As disclosed in note 3 to the consolidated financial statements, the management of the Group believes it has sufficient liquidity based upon the Group's credit facilities and the expected cash to be generated from operations.	• Agreeing the details of the repayment and drawdown of the Group's credit facilities to supporting documentation; and • Assessing appropriateness of the relevant disclosure in the consolidated financial statements.
Impairment of non-financial assets	
We identified the impairment of non-financial assets as a key audit matter due to the inherent subjectivity within the estimation of the present value of the future cash flows, a key component of determining the assets' recoverable amounts. Given the significance of the carrying amount, our focus has been on the assessment of the K&S Project. The recoverable amounts of the K&S Project have been determined based on a value-in-use calculations which includes judgements and estimations based upon management's input of key variables and market conditions including the expected production capacity of the K&S Project, ore reserve estimates, iron ore prices and costs of production. These calculations require the use of estimates of future cash flows based on projected income and expenses of the K&S project and its working capital needs over the life of the mine.	Our procedures in relation to the impairment of non-financial assets included: • Obtaining an understanding of the process over the annual impairment assessment including the Group's assessment of impairment indicators, preparation of the cash flow forecasts, setting of reasonable and supportable assumptions and inputs to the models used to estimate the recoverable amount over the life of the mine; • Testing the reasonableness of assumptions and the inputs used to determine the cash flow forecasts against historical performance, ore reserve estimate surveys, economic and industry indicators, publicly available information such as iron ore pricing forecasts and the Group's strategic plans;

KEY AUDIT MATTERS (CONTINUED)

Key audit matter	How our audit addressed the key audit matter
Impairment of non-financial assets (continued)	
Management is also required to choose appropriate discount rates in order to calculate the present values of those cash flows. Changes in the key assumptions on which the recoverable amount of the assets are based could significantly affect the Group's assessment resulting in an impairment loss being recognised or previously recognised amount being further reversed. As stated in note 8 to the consolidated financial statements, for the year ended 31 December 2019 no additional impairment or reversal of impairment has been recognised.	• Involving our internal valuation specialists to assess the appropriateness of the discount rate used; • Checking the underlying calculations used in the Group's assessment and performing sensitivity testing of the inputs used; and • Evaluating the sensitivity analysis performed by the management on the inputs used to evaluate the extent of impact on the estimated future cash flows.

OTHER INFORMATION

The directors of the Company are responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated financial statements and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF DIRECTORS AND THOSE CHARGED WITH GOVERNANCE FOR THE CONSOLIDATED FINANCIAL STATEMENTS

The directors of the Company are responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with HKFRSs issued by the HKICPA and the Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion solely to you, as a body, in accordance with section 405 of the Hong Kong Companies Ordinance, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with HKSAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.

- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in the independent auditor's report is Stephen David Smart.

Deloitte Touche Tohmatsu
Certified Public Accountants
Hong Kong
27 March 2020

CONSOLIDATED STATEMENT OF PROFIT OR LOSS

For the year ended 31 December 2019

	NOTES	2019 US$'000	2018 US$'000
Revenue	5	**177,164**	151,549
Operating expenses	7	**(145,793)**	(129,880)
Depreciation and amortisation	7	**(28,504)**	(21,208)
Impairment losses, net of reversal	8	**–**	90,483
Other income, gains and losses	9	**(4,250)**	6,811
Allowance for financial assets measured at amortised costs	36	**(23)**	(7,741)
Financial costs	10	**(40,421)**	(21,679)
(Loss) profit before taxation		**(41,827)**	68,335
Income tax credit (expense)	11	**3,157**	(130)
(Loss) profit for the year		**(38,670)**	68,205
(Loss) profit for the year attributable to:			
Owners of the Company		**(38,669)**	68,235
Non-controlling interests		**(1)**	(30)
		(38,670)	68,205
(Loss) earnings per share (US cents)	15		
Basic		**(0.55)**	0.96
Diluted		**(0.55)**	0.96

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

For the year ended 31 December 2019

	2019	2018
	US$'000	US$'000
(Loss) profit for the year	**(38,670)**	68,205
Other comprehensive income (expense) for the year:		
Items that may be reclassified subsequently to profit or loss:		
Exchange differences on translation of foreign operations	**802**	(1,057)
Fair value loss on hedging instruments designated in cash flow hedges	**(27,581)**	–
Release of fair value loss on hedging instruments in cash flow hedges	**23,296**	–
Total comprehensive (expense) income for the year	**(42,153)**	67,148
Total comprehensive (expense) income attributable to:		
Owners of the Company	**(42,291)**	67,411
Non-controlling interests	**138**	(263)
	(42,153)	67,148

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

At 31 December 2019

	NOTES	2019 US$'000	2018 US$'000
NON-CURRENT ASSETS			
Exploration and evaluation assets	16	**19,877**	19,497
Property, plant and equipment	17	**513,306**	533,446
Right-of-use assets	19	**9,334**	–
Interest in a joint venture		**–**	–
Inventories	21	**14,804**	10,926
Other non-current assets		**55**	3,282
Restricted bank deposit		**–**	977
		557,376	568,128
CURRENT ASSETS			
Inventories	21	**25,291**	23,168
Trade and other receivables	20	**14,301**	11,027
Time deposits	22	**661**	–
Bank balances	23	**3,631**	7,637
Income tax receivables		**1,125**	–
		45,009	41,832
Asset classified as held for sale	18	**5,045**	–
		50,054	41,832
TOTAL ASSETS		**607,430**	609,960
CURRENT LIABILITIES			
Trade and other payables	24	**(72,328)**	(54,788)
Lease liabilities	29	**(3,331)**	–
Income tax payable		**–**	(292)
Borrowings – due within one year	27	**(20,703)**	(111,954)
Other financial liabilities	28	**(4,285)**	–
		(100,647)	(167,034)
NET CURRENT LIABILITIES		**(50,593)**	(125,202)
TOTAL ASSETS LESS CURRENT LIABILITIES		**506,783**	442,926
NON-CURRENT LIABILITIES			
Deferred tax liabilities	26	**(2,522)**	(3,565)
Provision for close down and restoration costs	30	**(17,461)**	(10,026)
Lease liabilities	29	**(7,595)**	–
Construction costs payable	24	**–**	(8,910)
Borrowings – due more than one year	27	**(201,204)**	(100,915)
		(228,782)	(123,416)
TOTAL LIABILITIES		**(329,429)**	(290,450)
NET ASSETS		**278,001**	319,510

At 31 December 2019

	NOTES	**2019 US$'000**	2018 US$'000
CAPITAL AND RESERVES			
Share capital	25	**1,285,158**	1,285,158
Capital reserve		**17,984**	17,984
Reserves		**14,244**	17,216
Accumulated losses		**(1,039,221)**	(1,000,552)
EQUITY ATTRIBUTABLE TO OWNERS OF THE COMPANY		**278,165**	319,806
NON-CONTROLLING INTERESTS		**(164)**	(296)
TOTAL EQUITY		**278,001**	319,510

The consolidated financial statements on pages 93 to 177 were approved and authorised for issue by the board of directors on 27 March 2020 and are signed on its behalf by:

Yury Makarov
DIRECTOR

Danila Kotlyarov
DIRECTOR

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the year ended 31 December 2019

	Total attributable to owners of the Company									
	Share capital	Capital reserve[a]	Share-based payment reserve	Translation reserve	Hedging reserve	Other reserve[b]	Accumulated losses	Sub-total	Non-controlling interests	Total equity
	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000	US$'000
Balance at 1 January 2018	1,285,158	17,984	14,190	(21,882)	(1,852)	23,766	(1,068,787)	248,577	(33)	248,544
Profit (loss) for the year	–	–	–	–	–	–	68,235	68,235	(30)	68,205
Exchange differences on translation of foreign operations	–	–	–	(824)	–	–	–	(824)	(233)	(1,057)
Total comprehensive (expense) income for the year	–	–	–	(824)	–	–	68,235	67,411	(263)	67,148
Share-based payment expense	–	–	1,966	–	–	–	–	1,966	–	1,966
Recognition of fair value loss on hedging instruments in cash flow hedges	–	–	–	–	1,852	–	–	1,852	–	1,852
Balance at 31 December 2018	1,285,158	17,984	16,156	(22,706)	–	23,766	(1,000,552)	319,806	(296)	319,510
Loss for the year	–	–	–	–	–	–	(38,669)	(38,669)	(1)	(38,670)
Exchange differences on translation of foreign operations	–	–	–	663	–	–	–	663	139	802
Fair value loss on hedging instruments designated in cash flow hedges	–	–	–	–	(27,581)	–	–	(27,581)	–	(27,581)
Release of fair value loss on hedging instruments in cash flow hedges	–	–	–	–	23,296	–	–	23,296	–	23,296
Total comprehensive income (expense) for the year	–	–	–	663	(4,285)	–	(38,669)	(42,291)	138	(42,153)
Share-based payment expense	–	–	650	–	–	–	–	650	–	650
Dividend declared to non-controlling interests	–	–	–	–	–	–	–	–	(6)	(6)
Balance at 31 December 2019	1,285,158	17,984	16,806	(22,043)	(4,285)	23,766	(1,039,221)	278,165	(164)	278,001

(a) The amounts represent deemed contribution from the then ultimate holding company of the Company for 1) certain administrative expenses and tax expenses of the Group paid by the then ultimate holding company of the Company in prior years and 2) share-based payment expenses in relation to certain employees of the Group participated in the long term incentive plan of the then ultimate holding company of the Company.

(b) The amounts arose from 1) acquisition of non-controlling interests and deemed contribution arising from the group restructuring for the Company's listing on The Stock Exchange of Hong Kong Limited, "the Stock Exchange" 2) transfer of share-based payment reserve upon vesting of share-based awards resulted from difference between the cost of the treasury shares and fair value at grant date of the awarded shares, 3) deemed contribution from General Nice Development Limited ("General Nice"), a shareholder of the Company, for accrued interests on outstanding capital contribution, and 4) direct expenses in relation to the right to subscribe for shares of the Company granted to Tiger Capital Fund (as defined in note 25).

CONSOLIDATED STATEMENT OF CASH FLOWS

For the year ended 31 December 2019

	NOTES	2019 US$'000	2018 US$'000
OPERATING ACTIVITIES			
Net cash generated from operations	33	**32,427**	28,924
Income tax refund (paid)		**606**	(2,304)
NET CASH FROM OPERATING ACTIVITIES		**33,033**	26,620
INVESTING ACTIVITIES			
Restricted bank deposits withdrawn		**977**	1,000
Purchase of property, plant and equipment and exploration and evaluation assets		**(5,047)**	(3,374)
Time deposits placed	22	**(661)**	–
Time deposits withdrawn	22	**–**	347
Proceeds on disposal of property, plant and equipment		**1,950**	61
Interest received		**83**	82
NET CASH USED IN INVESTING ACTIVITIES		**(2,698)**	(1,884)
FINANCING ACTIVITIES			
Repayment of lease liabilities		**(2,953)**	–
Proceeds from borrowings		**240,000**	56,842
Repayment of borrowings		**(241,340)**	(65,563)
Interest expenses paid		**(20,756)**	(12,957)
Loan guarantee and debt arrangement fees paid		**(9,450)**	(400)
Waiver fee paid		**–**	(400)
NET CASH USED IN FINANCING ACTIVITIES		**(34,499)**	(22,478)
NET (DECREASE) INCREASE IN CASH AND CASH EQUIVALENTS FOR THE YEAR		**(4,164)**	2,258
CASH AND CASH EQUIVALENTS AT THE BEGINNING OF YEAR		**7,637**	8,650
Effect of foreign exchange rate changes		**158**	(3,271)
CASH AND CASH EQUIVALENTS AT THE END OF YEAR		**3,631**	7,637

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2019

1. GENERAL

IRC Limited ("the Company") is a public limited company incorporated in Hong Kong and its shares have been listed on the Stock Exchange since 21 October 2010. The Company together with its subsidiaries are hereinafter referred to as the "Group".

The address of the registered office and principal place of business of the Company is 6H, 9 Queen's Road Central, Hong Kong. The consolidated financial statements are presented in United States Dollars ("US$"), which is also the functional currency of the Company.

The principal activity of the Company is investment holding. The Group is principally engaged in the production and development of industrial commodities products including iron ore that are used in industry across the world. The main activities of the Group are in Russia and the People's Republic of China ("PRC") and the Group predominantly serves the Russian and Chinese markets. The activities of the Company's principal subsidiaries are set out in note 38.

2. APPLICATION OF NEW AND AMENDMENTS TO HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs")

New and Amendments to HKFRSs that are mandatorily effective for the current year

The Group has applied the following new and amendments to HKFRSs issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA") for the first time in the current year:

HKFRS 16	Leases
HK(IFRIC) – Int 23	Uncertainty over Income Tax Treatments
Amendments to HKFRS 9	Prepayment Features with Negative Compensation
Amendments to HKAS 19	Plan Amendment, Curtailment or Settlement
Amendments to HKAS 28	Long-term Interests in Associates and Joint Ventures
Amendments to HKFRSs	Annual Improvements to HKFRSs 2015–2017 Cycle

Except as described below, the application of the new and amendments to HKFRSs in the current year has had no material impact on the Group's financial positions and performance for the current and prior years and/or on the disclosures set out in these consolidated financial statements.

2.1 HKFRS 16 Leases

The Group has applied HKFRS 16 for the first time in the current year. HKFRS 16 superseded HKAS 17 *Leases* and the related interpretations.

Definition of a lease

The Group has elected the practical expedient to apply HKFRS 16 to contracts that were previously identified as leases applying HKAS 17 and HK(IFRIC)-Int 4 *Determining whether an Arrangement contains a Lease* and not apply this standard to contracts that were not previously identified as containing a lease. Therefore, the Group has not reassessed contracts which already existed prior to the date of initial application.

For contracts entered into or modified on or after 1 January 2019, the Group applies the definition of a lease in accordance with the requirements set out in HKFRS 16 in assessing whether a contract contains a lease.

2. APPLICATION OF NEW AND AMENDMENTS TO HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs") (CONTINUED)

New and Amendments to HKFRSs that are mandatorily effective for the current year (Continued)

2.1 HKFRS 16 Leases (Continued)

As a lessee

The Group has applied HKFRS 16 retrospectively with the cumulative effect recognised at the date of initial application, 1 January 2019.

As at 1 January 2019, the Group recognised lease liabilities and right-of-use assets at amounts equal to the related lease liabilities by applying HKFRS 16.C8(b)(ii) transition. Any difference at the date of initial application is recognised in the opening accumulated losses and comparative information has not been restated.

When applying the modified retrospective approach under HKFRS 16 at transition, the Group applied the following practical expedients to leases previously classified as operating leases under HKAS 17, on lease-by-lease basis, to the extent relevant to the respective lease contracts:

i. elected not to recognise right-of-use assets and lease liabilities for leases with lease term ends within 12 months of the date of initial application;

ii. excluded initial direct costs from measuring the right-of-use assets at the date of initial application;

iii. applied a single discount rate to a portfolio of leases with a similar remaining terms for similar class of underlying assets in similar economic environment. Specifically, discount rate for certain leases of wagons in Russia was determined on a portfolio basis; and

iv. used hindsight based on facts and circumstances as at date of initial application in determining the lease term for the Group's leases with extension and termination options.

When recognising the lease liabilities for leases previously classified as operating leases, the Group has applied incremental borrowing rates of the relevant group entities at the date of initial application. The weighted average incremental borrowing rate applied is 10.79%.

2. APPLICATION OF NEW AND AMENDMENTS TO HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs") (CONTINUED)

New and Amendments to HKFRSs that are mandatorily effective for the current year (Continued)

2.1 HKFRS 16 Leases (Continued)

As a lessee (Continued)

	At 1 January 2019 US$'000
Operating lease commitments disclosed as at 31 December 2018	16,900
Lease liabilities discounted at relevant incremental borrowing rates	12,804
Lease liabilities relating to operating leases recognised upon application of HKFRS 16 as at 1 January 2019	12,804
Analysis as:	
Current	2,659
Non-current	10,145
	12,804

The carrying amount of right-of-use assets as at 1 January 2019 comprises the following

	Right-of-use assets US$'000
Right-of-use assets relating to operating leases recognised upon application of HKFRS 16	12,804
By class:	
Mining assets	12,804

2. APPLICATION OF NEW AND AMENDMENTS TO HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs") (CONTINUED)

New and Amendments to HKFRSs that are mandatorily effective for the current year (Continued)

2.1 HKFRS 16 Leases (Continued)

As a lessor

In accordance with the transitional provisions in HKFRS 16, the Group is not required to make any adjustment on transition for leases in which the Group is a lessor but account for these leases in accordance with HKFRS 16 from the date of initial application and comparative information has not been restated.

The following adjustments were made to the amounts recognised in the consolidated statement of financial position at 1 January 2019. Line items that were not affected by the changes have not been included.

	Carrying amounts previously reported at 31 December 2018	Adjustment	Carrying amounts under HKFRS 16 at 1 January 2019
	US$'000	US$'000	US$'000
Non-current assets			
Right-of-use assets	–	12,804	12,804
Current liabilities			
Lease liabilities	–	2,659	2,659
Non-current liabilities			
Lease liabilities	–	10,145	10,145

Note: For the purpose of reporting cash flows from operating activities under indirect method for the year ended 31 December 2019, movements in working capital have been computed based on opening statement of financial position as at 1 January 2019 as disclosed above.

2. APPLICATION OF NEW AND AMENDMENTS TO HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs") (CONTINUED)

New and amendments to HKFRSs in issue but not yet effective

The Group has not early applied the following new and amendments to HKFRSs that have been issued but are not yet effective:

HKFRS 17	Insurance Contracts[1]
Amendments to HKFRS 3	Definition of a Business[2]
Amendments to HKFRS 10 and HKAS 28	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture[3]
Amendments to HKAS 1 and HKAS 8	Definition of Material[4]
Amendments to HKFRS 9, HKAS 39 and HKFRS 7	Interest Rate Benchmark Reform[4]

1 Effective for annual periods beginning on or after 1 January 2021
2 Effective for business combinations and asset acquisitions for which the acquisition date is on or after the beginning of the first annual period beginning on or after 1 January 2020
3 Effective for annual periods beginning on or after a date to be determined
4 Effective for annual periods beginning on or after 1 January 2020

In addition to the above new and amendments to HKFRSs, a revised Conceptual Framework for Financial Reporting was issued in 2018. Its consequential amendments, *the Amendments to References to the Conceptual Framework in HKFRS Standards*, will be effective for annual periods beginning on or after 1 January 2020.

Except for the new and amendments to HKFRS mentioned below, the directors of the Company anticipate that the application of all new and amendments to HKFRSs will have no material impact on the consolidated financial statements in the foreseeable future.

2. APPLICATION OF NEW AND AMENDMENTS TO HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs") (CONTINUED)

Amendments to HKAS 1 and HKAS 8 Definition of Material

The amendments provide refinements to the definition of material by including additional guidance and explanations in making materiality judgments. In particular, the amendments:

- include the concept of "obscuring" material information in which the effect is similar to omitting or misstating the information;
- replace threshold for materiality influencing users from "could influence" to "could reasonably be expected to influence"; and
- include the use of the phrase "primary users" rather than simply referring to "users" which was considered too broad when deciding what information to disclose in the financial statements.

The amendments also align the definition across all HKFRSs and will be mandatorily effective for the Group's annual period beginning on 1 January 2020. The application of the amendments is not expected to have significant impact on the financial position and performance of the Group but may affect the presentation and disclosures in the consolidated financial statements.

Conceptual Framework for Financial Reporting 2018 (the "New Framework") and the Amendments to References to the Conceptual Framework in HKFRS Standards

The New Framework:

- reintroduces the terms stewardship and prudence;
- introduces a new asset definition that focuses on rights and a new liability definition that is likely to be broader than the definition it replaces, but does not change the distinction between a liability and an equity instrument;
- discusses historical cost and current value measures, and provides additional guidance on how to select a measurement basis for a particular asset or liability;
- states that the primary measure of financial performance is profit or loss, and that only in exceptional circumstances other comprehensive income will be used and only for income or expenses that arise from a change in the current value of an asset or liability; and
- discusses uncertainty, derecognition, unit of account, the reporting entity and combined financial statements.

Consequential amendments have been made so that references in certain HKFRSs have been updated to the New Framework, whilst some HKFRSs are still referred to the previous versions of the framework. These amendments are effective for annual periods beginning on or after 1 January 2020, with earlier application permitted. Other than specific standards which still refer to the previous versions of the framework, the Group will rely on the New Framework on its effective date in determining the accounting policies especially for transactions, events or conditions that are not otherwise dealt with under the accounting standards.

For the year ended 31 December 2019

3. SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies applied in the preparation of the consolidated financial statements are set out as below. These policies have been consistently applied to all the years presented, unless otherwise stated.

Basis of presentation and preparation

The consolidated financial statements have been prepared in accordance with HKFRSs issued by the HKICPA. In addition, the consolidated financial statements include applicable disclosures required by the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited ("Listing Rules") and the Hong Kong Companies Ordinance.

The consolidated financial statements have been prepared on a going concern basis. As at 31 December 2019, the Group had net current liabilities of approximately US$50.6 million (2018: US$125.2 million). The management of the Group has prepared a cash flow forecast which involves judgments and estimations based upon management's input of key variables and market conditions including the expected production capacity of the Kimkan and Sutara Project ("K&S Project"), iron ore prices and costs of production. The cash flow forecast has been determined using estimations of future cash flows based upon projected income and expenses of the Group and its working capital needs.

However, if the market conditions turn out to be significantly less favourable to the Group than predicted, the Group may not have sufficient working capital to finance its operations and loan repayments resulting in its financial liquidity being adversely impacted. The Group would need to carry out contingency plans including obtaining debt financing from its majority shareholder, entering into negotiations with banks or other investors for additional debt or equity financing.

The Group believes it will have sufficient liquidity based upon the credit facilities (see note 27) and the expected cash to be generated from operations to meet its financial obligations as they fall due for the following twelve months.

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Basis of presentation and preparation (Continued)

The consolidated financial statements have been prepared on the historical cost basis except for certain financial instruments that are measured at fair values at the end of each reporting period, as explained in the accounting policies set out below.

Historical cost is generally based on the fair value of the consideration given in exchange for goods and services.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Group takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in these consolidated financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of HKFRS 2 *Share-based Payment*, leasing transactions that are accounted for in accordance with HKFRS 16 (since 1 January 2019) or HKAS 17 (before application of HKFRS 16), and measurements that have some similarities to fair value but are not fair value, such as net realisable value in HKAS 2 *Inventories* or value in use in HKAS 36 *Impairment of Assets*.

In addition, for financial reporting purposes, fair value measurements are categorised into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;

- Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and

- Level 3 inputs are unobservable inputs for the asset or liability.

The principal accounting policies are set out below.

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Basis of consolidation

The consolidated financial statements incorporate the financial statements of the Company and entities including structured entities controlled by the Company and its subsidiaries. Control is achieved when the Company:

- has power over the investee;
- is exposed, or has rights, to variable returns from its involvement with the investee; and
- has the ability to use its power to affect its returns.

The Group reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control 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 profit or loss from the date the Group gains control until the date when the Group ceases to control the subsidiary.

Profit or loss and each item of other comprehensive income are attributed to the owners of the Company and to the non-controlling interests. Total comprehensive income of subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies in line with the Group's accounting policies.

All intragroup assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

Non-controlling interests in subsidiaries are presented separately from the Group's equity therein, which represent present ownership interests entitling their holders to a proportionate share of net assets of the relevant subsidiaries upon liquidation.

Non-current assets held for sale

Non-current assets are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. This condition is regarded as met only when the asset is available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such asset and its sale is highly probable. Management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

Non-current assets classified as held for sale are measured at the lower of their previous carrying amount and fair value less costs to sell, which continue to be measured in accordance with the accounting policies as set out in respective sections.

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Revenue from contracts with customers

The Group recognises revenue when (or as) a performance obligation is satisfied, i.e. when “control” of the goods or services underlying the particular performance obligation is transferred to the customer.

A performance obligation represents a good or service (or a bundle of goods or services) that is distinct or a series of distinct goods or services that are substantially the same.

Control is transferred over time and revenue is recognised over time by reference to the progress towards complete satisfaction of the relevant performance obligation if one of the following criteria is met:

- the customer simultaneously receives and consumes the benefits provided by the Group’s performance as the Group performs;
- the Group’s performance creates or enhances an asset that the customer controls as the Group performs; or
- the Group’s performance does not create an asset with an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date.

Otherwise, revenue is recognised at a point in time when the customer obtains control of the distinct good or service.

A contract asset represents the Group’s right to consideration in exchange for goods or services that the Group has transferred to a customer that is not yet unconditional. It is assessed for impairment in accordance with HKFRS 9. In contrast, a receivable represents the Group’s unconditional right to consideration, i.e. only the passage of time is required before payment of that consideration is due.

A contract liability represents the Group’s obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer.

A contract asset and a contract liability relating to the same contract are accounted for and presented on a net basis.

Contracts with multiple performance obligations (including allocation of transaction price)

For contracts that contain more than one performance obligations (for the sales of iron ore and shipping service), the Group allocates the transaction price to each performance obligation on a relative stand-alone selling price basis.

The stand-alone selling price of the distinct good or service underlying each performance obligation is determined at contract inception. It represents the price at which the Group would sell a promised good or service separately to a customer. If a stand-alone selling price is not directly observable, the Group estimates it using appropriate techniques such that the transaction price ultimately allocated to any performance obligation reflects the amount of consideration to which the Group expects to be entitled in exchange for transferring the promised goods or services to the customer.

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Revenue from contracts with customers (Continued)

Over time revenue recognition: measurement of progress towards complete satisfaction of a performance obligation

Output method

The progress towards complete satisfaction of a performance obligation is measured based on output method, which is to recognise revenue on the basis of direct measurements of the value of the goods or services transferred to the customer to date relative to the remaining goods or services promised under the contract, that best depict the Group's performance in transferring control of goods or services.

As a practical expedient, if the Group has a right to consideration in an amount that corresponds directly with the value of the Group's performance completed to date, the Group recognises revenue in the amount to which the Group has the right to invoice.

Leases

Definition of a lease (upon application of HKFRS 16 in accordance with transitions in note 2)

A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

For contracts entered into or modified on or after the date of initial application, the Group assesses whether a contract is or contains a lease based on the definition under HKFRS 16 at inception or modification date. Such contract will not be reassessed unless the terms and conditions of the contract are subsequently changed.

The Group as a lessee (upon application of HKFRS 16 in accordance with transitions in note 2)

Allocation of consideration to components of a contract

For a contract that contains a lease component and one or more additional lease or non-lease components, the Group allocates the consideration in the contract to each lease component on the basis of the relative stand-alone price of the lease component and the aggregate stand-alone price of the non-lease components.

Non-lease components are separated from lease components on the basis of their relative stand-alone prices.

As a practical expedient, leases with similar characteristics are accounted on a portfolio basis when the Group reasonably expects that the effects on the consolidated financial statements would not differ materially from individual leases within the portfolio.

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Leases (Continued)

The Group as a lessee (upon application of HKFRS 16 in accordance with transitions in note 2) (Continued)

Short-term leases and leases of low-value assets

The Group applies the short-term lease recognition exemption to leases of locomotives and office premises in Russia that have a lease term of 12 months or less from the commencement date and do not contain a purchase option. It also applies the recognition exemption for lease of low-value assets. Lease payments on short-term leases and leases of low-value assets are recognised as expense on a straight-line basis over the lease term.

Right-of-use assets

The cost of right-of-use asset includes:

- the amount of the initial measurement of the lease liability;
- any lease payments made at or before the commencement date, less any lease incentives received;
- any initial direct costs incurred by the Group; and
- an estimate of costs to be incurred by the Group in dismantling and removing the underlying assets, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease.

Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities.

Right-of-use assets in which the Group is reasonably certain to obtain ownership of the underlying leased assets at the end of the lease term is depreciated from commencement date to the end of the useful life. Otherwise, right-of-use assets are depreciated on a straight-line basis over the shorter of its estimated useful life and the lease term.

The Group presents right-of-use assets as a separate line item on the consolidated statement of financial position.

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Leases (Continued)

The Group as a lessee (upon application of HKFRS 16 in accordance with transitions in note 2) (Continued)

Lease liabilities

At the commencement date of a lease, the Group recognises and measures the lease liability at the present value of lease payments that are unpaid at that date. In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable.

The lease payments include:

- fixed payments (including in-substance fixed payments) less any lease incentives receivable;
- variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
- amounts expected to be paid under residual value guarantees;
- the exercise price of a purchase option if the Group is reasonably certain to exercise the option; and
- payments of penalties for terminating a lease, if the lease term reflects the Group exercising an option to terminate the lease.

After the commencement date, lease liabilities are adjusted by interest accretion and lease payments.

The Group remeasures lease liabilities (and makes a corresponding adjustment to the related right-of-use assets) whenever:

- the lease term has changed or there is a change in the assessment of exercise of a purchase option, in which case the related lease liability is remeasured by discounting the revised lease payments using a revised discount rate at the date of reassessment.
- the lease payments change due to changes in market rental rates following a market rent review, in which cases the related lease liability is remeasured by discounting the revised lease payments using the initial discount rate.

The Group as lessee (prior to 1 January 2019)

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

Operating lease payments are recognised as an expense on a straight-line basis over the lease term.

In the event that lease incentives are received to enter into operating leases, such incentives are recognised as a liability. The aggregate benefit of incentives is recognised as a reduction of rental expense on a straight-line basis.

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Leases (Continued)

The Group as a lessor

Leases for which the Group is a lessor are classified as finance or operating leases. Whenever the terms of the lease transfer substantially all the risks and rewards incidental to ownership of an underlying assets to the lessee, the contract is classified as a finance lease. All other leases are classified as operating leases.

Floor space of buildings and other assets may be leased to contractors under an operating lease, for use in the construction of mining properties.

Rental income from operating leases is recognised in profit or loss on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset, and such costs are recognised as an expense on a straight-line basis over the lease term.

The Group as a lessor (upon application of HKFRS 16 in accordance with transitions in note 2)

Sublease

When the Group is an intermediate lessor, it accounts for the head lease and the sublease as two separate contracts. The sublease is classified as a finance or operating lease by reference to the right-of-use asset arising from the head lease, not with reference to the underlying asset.

Foreign currencies

In preparing the financial statements of each individual group entity, transactions in currencies other than the functional currency of that entity (foreign currencies) are recognised at the rates of exchange prevailing on the dates of the transactions. At the end of the reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences arising on the settlement of monetary items, and on the retranslation of monetary items, are recognised in profit or loss in the period in which they arise.

For the purposes of presenting the consolidated financial statements, the assets and liabilities of the Group's foreign operations are translated into the presentation currency of the Group (i.e. United States dollars) using exchange rates prevailing at the end of each reporting period. Income and expenses items are translated at the average exchange rates for the year, unless exchange rates fluctuate significantly during the year, in which case, the exchange rates prevailing at the dates of transactions are used. Exchange differences arising, if any, are recognised in other comprehensive income and accumulated in equity under the heading of translation reserve (attributed to non-controlling interests as appropriate).

On the disposal of a foreign operation, all of the exchange differences accumulated in equity in respect of the foreign operation attributable to the owners of the Company are reclassified to profit or loss.

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale. Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

All other borrowing costs are recognised in profit or loss in the year in which they are incurred.

Retirement benefit costs

The Group does not operate a pension scheme. However, payments are made to defined contribution retirement benefit arrangements for certain employees and these are charged as an expense as they rendered services entitling them to the contributions.

Share options granted to shareholders

Where share options are granted to shareholders as part of a share subscription of the Company's shares, the components amount is recognised in other reserve in the equity of the Company on a pro-rata basis based on the fair values of the components on the proceeds from the share subscription.

Taxation

Taxation expense represents the sum of the tax currently payable and deferred tax.

The tax currently payable is based on taxable profit for the year. Taxable profit differs from profit/loss before tax because it excludes items of income or expense that are taxable or deductible in other years and it further excludes items that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of each reporting period.

Deferred tax is recognised on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax liabilities are generally recognised for all taxable temporary differences. Deferred tax assets are generally recognised for all deductible differences to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilised. Such assets and liabilities are not recognised if the temporary difference arises from the initial recognition of goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Taxation (Continued)

When a group entity's taxable profit or tax loss is determined in a currency other than its functional currency, and consequently, the tax base of its non-monetary assets and liabilities changes in the exchange rate give rise to temporary differences that result in a recognised deferred tax liability or asset subject to the general recognition criteria. The resulting deferred tax is recognised in profit or loss.

Deferred tax liabilities are recognised for taxable temporary differences arising on investments in subsidiaries and interests in joint ventures, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognised to the extent that it is probable that there will be sufficient taxable profits against which to utilise the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

For leasing transactions in which the tax deductions are attributable to the lease liabilities, the Group applies HKAS 12 *Income Taxes* requirements to the leasing transaction as a whole. Temporary differences relating to right-of-use assets and lease liabilities are assessed on a net basis. Excess of depreciation on right-of-use assets over the lease payments for the principal portion of lease liabilities resulting in net deductible temporary differences.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the liability is settled or the asset is realised, based on tax rate (and tax laws) that have been enacted or substantially enacted by the end of the reporting period.

The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities. Current and deferred tax are recognised in profit or loss, except when they relates to items that are recognised in other comprehensive income or directly in equity, in which case the current and deferred tax are also recognised in other comprehensive income or directly in equity respectively.

Share-based payments

Equity-settled share-based payment transactions

Share options granted to employees

Equity-settled share-based payments to employees and other providing similar services are measured at fair value at the date of grant.

The fair value of the equity-settled share-based payments determined at the grant date without taking into consideration all non-market vesting conditions is expensed on a straight-line basis over the vesting period, based on the Group's estimate of equity instruments that will eventually vest, with a corresponding increase in equity (share-based payment reserve). At the end of each reporting period, the Group revises its estimates of the number of equity instruments expected to vest. The impact of the revision of the original estimates, if any, is recognised in profit or loss such that the cumulative expense reflects the revised estimate, with a corresponding adjustment to share-based payment reserve.

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Share-based payments (Continued)

Equity-settled share-based payment transactions (Continued)

Share options granted to employees (Continued)

When share options are exercised, the amount previously recognised in share-based payments reserve will be transferred to share capital. When the share options are forfeited after the vesting date or are still not exercised at the expiry date, the amount previously recognised in share-based payments reserve will be transferred to accumulated losses.

Exploration and evaluation assets

Exploration and evaluation expenditure and mineral rights acquired

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, is capitalised and recorded on the consolidated 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.

Mineral rights acquired through a business combination are capitalised separately from goodwill if the asset is separable or arises from contractual or legal rights and the fair value can be measured reliably on initial recognition. Exploration and evaluation expenditure capitalised and mining rights acquired 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 expenditure capitalised and mining rights within 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.

Non-mining assets

Non-mining assets are initially valued at cost, being the purchase price and the directly attributable cost of acquisition or construction required to bring the asset to the location and condition necessary for the asset to be capable of operating in the manner intended by the Group, and are subsequently valued at cost less accumulated depreciation and impairment, if any.

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Exploration and evaluation assets (Continued)

Mine development costs and mining assets

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”, this includes any property, plant and equipment acquired to undertake mining activities. 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. Depreciation policy for mining assets are set out below under “*Depreciation*”. Mine development costs are tested for impairment as stated in “impairment losses on exploration and evaluation assets, property, plant and equipment and right-of-use assets” section.

Deferred stripping cost in development phase

In open pit operations the removal of overburden and waste materials, referred to as stripping, is required to obtain access to the ore body. Such costs when incurred during the development of the mine are deferred in the consolidated statement of financial position as part of mine development costs, and charged to the profit or loss over the life of the mine on a unit of production basis.

Property, plant and equipment

Deferred stripping costs in production phase

During production phase, cost incurred in relation to stripping activity is capitalised and recorded on the consolidated statement of financial position to the extent the stripping activity improved access to ore, which is when the following conditions are satisfied:

- it is probable that the future economic benefit (improved access to the ore body) associated with the stripping activity will flow to the entity;

- the entity can identify the component of the ore body for which access has been improved; and

- the costs relating to the stripping activity associated with that component can be measured reliably.

To the extent that the benefit from the stripping activity is realised in the form of inventory produced, the Group accounts for the costs of that stripping activity in accordance with the accounting policy of inventories (see accounting policy of inventories for details).

When the costs relating to improved access to ore (i.e. a stripping activity asset) and the costs of the inventory produced are not separately identifiable, production stripping costs are allocated between the stripping activity asset and inventory using a relevant production measure (i.e. actual vs. expected volume of waste extracted).

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Property, plant and equipment (Continued)

Production stripping costs capitalised as mine development costs and are subsequently carried at cost and depreciated on a unit of production basis over the expected useful life of the identified component of the ore body that becomes more accessible as a result of the stripping activity, less any impairment losses.

Depreciation

Property, plant and equipment are depreciated using a units of production method or straight-line basis as set out below.

Mining assets which are plant and machineries acquired to undertake mining activities are depreciated on a straight-line basis based on estimated useful lives of 2 to 20 years. Other mining assets for which economic benefits from the asset are consumed in a pattern linked to the production level, are depreciated using a units of production method based on ore reserves, which in turn results in a depreciation charge proportional to the depletion of reserves.

Non-mining assets are depreciated on a straight-line basis based on estimated useful lives.

Mine development costs and construction in progress are not depreciated, except for that 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.

Estimated useful lives of non-mining assets normally vary as set out below.

	Estimated useful life Number of years
Buildings	15–50
Plant and machinery	2–20
Vehicles	5–7
Leasehold improvements	2
Fixtures and equipment	2
Office equipment	2–10
Computer equipment	3–5

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Impairment on exploration and evaluation assets, property, plant and equipment and right-of-use assets

At the end of each reporting period, the Group reviews the carrying amounts of its exploration and evaluation assets, property, plant and equipment and right-of-use assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss, if any.

The recoverable amount of exploration and evaluation assets, property, plant and equipment and right-of-use assets are estimated individually. When it is not possible to estimate the recoverable amount individually, the Group estimates the recoverable amount of the cash-generating unit ("CGU") to which the asset belongs.

In addition, corporates assets are allocated to individual cash generating units when a reasonable and consistent basis of allocation can be established, or otherwise they are allocated to the smallest group of cash generating units for which a reasonable and consistent allocation basis can be established. The Group assesses whether there is indication that corporate assets may be impaired. If such indication exists, the recoverable amount is determined for the cash-generating unit or group of cash-generating units to which the corporate asset belongs, and is compared with the carrying amount of the relevant cash-generating unit or group of cash-generating units.

Recoverable amount is the higher of fair value less costs of disposal and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or CGU) is estimated to be less than its carrying amount, the carrying amount of the asset (or CGU) is reduced to its recoverable amount. For corporate assets or portion of corporate assets which cannot be allocated on a reasonable and consistent basis to a CGU, the Group compares the carrying amount of a group of CGUs, including the carrying amounts of the corporate assets or portion of corporate assets allocated to that group of CGUs, with the recoverable amount of the group of CGUs. In allocating the impairment loss, the impairment loss is allocated to reduce the carrying amount of the assets on a pro-rata basis based on the carrying amount of each asset in the unit or the group of CGUs. The carrying amount of an asset is not reduced below the highest of its fair value less costs of disposal (if measurable), its value in use (if determinable) and zero. The amount of the impairment loss that would otherwise have been allocated to the asset is allocated pro rata to the other assets of the unit or the group of CGUs. An impairment loss is recognised immediately in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or CGU or a group of CGUs) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or CGU or a group of CGUs) in prior years. A reversal of an impairment loss is recognised immediately in profit or loss.

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost comprises direct materials and, where applicable, direct labour costs and those overheads that have been incurred in bringing the inventories to their present location and condition. Cost of raw materials and consumables is determined on a first-in-first-out basis. Net realisable value represents the estimated selling price less all estimated costs of completion and costs to be incurred in marketing, selling and distribution. Inventories include ore stockpiles and other partly processed material. Stockpiles represent ore that has been extracted and is available for further processing. If there is significant uncertainty as to if, and/or when the stockpiled ore will be processed, the ore is expensed as mined. If the ore will not be processed within 12 months after the reporting date, it is included within non-current assets and net realisable value is calculated on the discounted cash flow basis.

Provision for close down and restoration costs

Provisions are recognised when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that the Group will be required to settle that obligation, and a reliable estimate can be made of the amount of the obligation.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows (where the effect of the time value of money is material).

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. Provision 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 unwinding of the discount applied in establishing the net present value of provision is charged to profit or loss for the year. The unwinding of the discount is shown as a financing cost, rather than as an operating cost. Other movements in the provision 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 the end of each reporting period. All costs of continuous rehabilitation are charged to profit or loss as incurred.

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Financial instruments

Financial assets and financial liabilities are recognised when a group entity becomes a party to the contractual provisions of the instrument.

Financial assets and financial liabilities are initially measured at fair value except for trade receivables arising from contracts with customers which are initially measured in accordance with HKFRS 15. 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.

The effective interest method is a method of calculating the amortised cost of a financial asset or financial liability and of allocating interest income and interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts and payments (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial asset or financial liability, or if appropriate, a shorter period to the net carrying amount on initial recognition.

Financial assets

Classification and subsequent measurement of financial assets

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 achieved by both selling and to collecting contractual cash flows; and

- the contractual terms 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 through profit or loss (“FVTPL”).

Financial assets at FVTPL

Financial assets that do not meet the criteria for being measured at amortised cost are measured at FVTPL.

Financial assets at FVTPL are measured at fair value at the end of each reporting period, with any fair value gains or losses recognised in profit or loss. The net gain or loss recognised in profit or loss excludes any interest earned on the financial asset and is included in the “Other income, gains and losses” line item.

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Financial instruments (Continued)

Financial assets (Continued)

Impairment of financial assets

The Group performs impairment assessment under expected credit loss ("ECL") model (including other receivables, restricted bank deposit, time deposits and bank balances). The amount of ECL is updated at each reporting date to reflect changes in credit risk since initial recognition.

Lifetime ECL represents the ECL that will result from all possible default events over the expected life of the relevant instrument. In contrast, 12-month ECL ("12m ECL") represents the portion of lifetime ECL that is expected to result from default events that are possible within 12 months after the reporting date. Assessment are done based on the Group's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current conditions at the reporting date as well as the forecast of future conditions.

For all financial assets except for trade receivables which are measured at fair value, the Group measures the loss allowance equal to 12m ECL, unless when there has been a significant increase in credit risk since initial recognition, the Group recognises lifetime ECL. The assessment of whether lifetime ECL should be recognised is based on significant increases in the likelihood or risk of a default occurring since initial recognition.

(i) Significant increase in credit risk

In assessing whether the credit risk has increased significantly since initial recognition, the Group compares the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition. In making this assessment, the Group considers both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort.

In particular, the following information is taken into account when assessing whether credit risk has increased significantly:

- an actual or expected significant deterioration in the financial instrument's external (if available) or internal credit rating;

- significant deterioration in external market indicators of credit risk, e.g. a significant increase in the credit spread, the credit default swap prices for the debtor;

- existing or forecast adverse changes in business, financial or economic conditions that are expected to cause a significant decrease in the debtor's ability to meet its debt obligations;

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Financial instruments (Continued)

Financial assets (Continued)

Impairment of financial assets (Continued)

(i) Significant increase in credit risk (Continued)

- an actual or expected significant deterioration in the operating results of the debtor;

- an actual or expected significant adverse change in the regulatory, economic, or technological environment of the debtor that results in a significant decrease in the debtor's ability to meet its debt obligations.

Irrespective of the outcome of the above assessment, the Group presumes that the credit risk has increased significantly since initial recognition when contractual payments are more than 30 days past due, unless the Group has reasonable and supportable information that demonstrates otherwise.

(ii) Definition of default

The Group considers that default has occurred when the instrument is more than 90 days past due unless the Group has reasonable and supportable information to demonstrate that a more lagging default criterion is more appropriate.

(iii) Credit-impaired financial assets

A financial asset is credit-impaired when one or more events of default 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 includes 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; or

- the disappearance of an active market for that financial asset because of financial difficulties.

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3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Financial instruments (Continued)

Financial assets (Continued)

Impairment of financial assets (Continued)

(iv) Write-off policy

The Group writes off a financial asset when there is information indicating that the counterparty is in severe financial difficulty and there is no realistic prospect of recovery, for example, when the counterparty has been placed under liquidation or has entered into bankruptcy proceedings. Financial assets written off may still be subject to enforcement activities under the Group's recovery procedures, taking into account legal advice where appropriate. A write-off constitutes a derecognition event. Any subsequent recoveries are recognised in profit or loss.

(v) Measurement and recognition of ECL

The measurement of ECL is a function of the probability of default, loss given default (i.e. the magnitude of the loss if there is a default) and the exposure at default. The assessment of the probability of default and loss given default is based on historical data adjusted by forward-looking information. Estimation of ECL reflects an unbiased and probability-weighted amount that is determined with the respective risks of default occurring as the weights.

Generally, the ECL is the difference between all contractual cash flows that are due to the Group in accordance with the contract and the cash flows that the Group expects to receive, discounted at the effective interest rate determined at initial recognition.

Interest income is calculated based on the gross carrying amount of the financial asset unless the financial asset is credit impaired, in which case interest income is calculated based on amortised cost of the financial asset.

Derecognition of financial assets

The Group derecognises a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognises its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

On derecognition of a financial asset measured at amortised cost, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognised in profit or loss.

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Financial instruments (Continued)

Financial liabilities and equity

Classification as debt or equity

Debt and equity instruments are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

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 by the Company are recorded at the proceeds received, net of direct issue costs.

Financial liabilities at amortised cost

Financial liabilities including borrowings, trade and other payables and construction costs payable are subsequently measured at amortised cost, using the effective interest method.

Transaction costs on borrowings

Transaction costs that are directly attributable to the raising of borrowings are recognised on the statement of financial position on an accrual basis. Such costs will be deducted from the fair value of the borrowings on initial recognition (that is, when the relevant borrowings are drawn). They form part of the borrowings and will be accounted for using an effective interest method over the loan period.

Derecognition of financial liabilities

The Group derecognises financial liabilities when, and only when, the Group's obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable is recognised in profit or loss.

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Financial instruments (Continued)

Hedge accounting

The Group designates certain derivatives as hedging instruments for cash flow hedges.

At the inception of the hedging relationship the Group documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Group documents whether the hedging instrument is highly effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk.

Assessment of hedging relationship and effectiveness

For hedge effectiveness assessment, the Group considers whether the hedging instrument is effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk, which is when the hedging relationships meet all of the following hedge effectiveness requirements:

- there is an economic relationship between the hedged item and the hedging instrument;
- the effect of credit risk does not dominate the value changes that result from that economic relationship; and
- the hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Group actually hedges and the quantity of the hedging instrument that the entity actually uses to hedge that quantity of hedged item.

If a hedging relationship ceases to meet the hedge effectiveness requirement relating to the hedge ratio but the risk management objective for that designated hedging relationship remains the same, the Group adjusts the hedge ratio of the hedging relationship (i.e. rebalances the hedge) so that it meets the qualifying criteria again.

3. SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

Financial instruments (Continued)

Hedge accounting (Continued)

Cash flow hedges

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges are recognised in other comprehensive income and accumulated under the heading of hedging reserve. The gain or loss relating to the ineffective portion is recognised immediately in profit or loss and is included in the "other income, gains and losses" line item.

Amounts previously recognised in other comprehensive income and accumulated in equity (hedging reserve) are reclassified to profit or loss in the periods when the hedged item affects profit or loss, in the same line of the consolidated statement of profit or loss as the recognised hedged item. Furthermore, if the Group expects that some or all of the loss accumulated in the cash flow hedging reserve will not be recovered in the future, that amount is immediately reclassified to profit or loss.

Discontinuation of hedge accounting

The Group discontinues hedge accounting prospectively only when the hedging relationship (or a part thereof) ceases to meet the qualifying criteria (after rebalancing, if applicable). This includes instances when the hedging instrument expires or is sold, terminated or exercised. Discontinuing hedge accounting can either affect a hedging relationship in its entirety or only a part of it (in which case hedge accounting continues for the remainder of the hedging relationship).

For cash flow hedge, any gain or loss recognised in other comprehensive income and accumulated in equity at that time remains in equity and is recognised when the forecast transactions 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.

4. KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of the Group's accounting policies, which are described in note 3, management is required to make judgement, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an on-going basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Impairment of property, plant and equipment and assessment of cash generating units

The Group reviews the carrying value of its property, plant and equipment to determine whether there is any indication that those assets are impaired. In making assessments for impairment, assets that do not generate independent cash flows are allocated to an appropriate CGU. The recoverable amount of those assets, or CGU, is measured at the higher of their fair value less costs of disposal and value in use.

Management necessarily applies its judgement in estimating the probability, timing and value of underlying cash flows and in selecting appropriate discount rates to be applied within the value in use calculation.

Changes to the assumptions underlying the assessment of the recoverable value may result in changes to impairment charges, either through further impairment charges or reversal of previously recognised impairments, which could have a significant impact on the financial information in future periods. In addition, changes to iron ore prices, ore reserve estimates, production costs, capacity and increases in the total forecast cost of planned projects or negative outcomes to exploration and evaluation activities could lead to further impairment charges or reversals in the future. With the K&S Project in commercial production and improvements in the spot iron ore price in the current year, management has revisited the assessment of the recoverable amount of the K&S Project and is confident that the carrying amount of the assets will be recovered in full resulting in no further impairment charge or partial reversal of the impairment charge in the statement of profit or loss for the year ended 31 December 2019 (2018: reversal of impairment charge of US$90.5 million).

4. KEY SOURCES OF ESTIMATION UNCERTAINTY (CONTINUED)

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 of December 2004 (the "JORC Code") or Canadian Institute of Mining, Metallurgy and Petroleum valuation standards ("CIM"). The JORC Code and CIM 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, impairment charges and for forecasting the timing of the payment of closedown and restoration costs. Also, for the purpose of impairment review 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;

- Depreciation charged in the consolidated statement of 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; and

- Carrying value of deferred tax assets and liabilities where changes in estimated reserves affect the carrying value of the relevant assets and liabilities.

4. KEY SOURCES OF ESTIMATION UNCERTAINTY (CONTINUED)

Exploration and evaluation costs

The Group's accounting policy for exploration and evaluation expenditure results in such expenditure being capitalised for those projects for which such expenditure is considered likely to be recoverable through future extraction activity or sale, or for which 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 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. Management is confident that the carrying amount of the assets will be recovered in full. As at 31 December 2019, the carrying amount of the exploration and evaluation is US$19.9 million (2018: US$19.5 million).

Provision for restoration, rehabilitation and environmental costs

Costs arising from site restoration works, and the decommissioning of plant, discounted to their present value, are provided for and capitalised at the start of each project, as soon as the obligation to incur such costs arises. The provision is based on estimates prepared by external consultants. Management uses its judgement and experience to provide for these costs. The ultimate costs of site restoration and decommissioning are uncertain, and cost estimates can vary in response to many factors including changes to relevant legal requirements, the emergence of new restoration techniques or experience at other mine sites. The expected timing and extent of expenditure can also change, for example in response to changes in ore reserves or processing levels. As a result, there could be significant adjustments to the provisions established which would affect future financial results. As at 31 December 2019, US$17.5 million (2018: US$10.0 million) have been provided for the close down and restoration costs.

Deferred tax

Recognition of deferred tax assets requires management to assess the likelihood that future taxable profits will be available which the deferred tax asset can be utilised to offset. This requires management to assess future tax profits of the business and the likelihood and timing of these amounts. Details of deferred tax assets from unused tax losses are disclosed in note 26.

5. REVENUE

(i) Disaggregation of revenue from contracts with customers

For the year ended 31 December 2019

Segments	Mine in production US$'000	Engineering US$'000	Total US$'000
Types of goods or services			
Sale of iron ore concentrate	**153,708**	**–**	**153,708**
Delivery services	**22,102**	**–**	**22,102**
Engineering services	**–**	**1,354**	**1,354**
	175,810	**1,354**	**177,164**
Geographical markets			
PRC	**76,901**	**–**	**76,901**
Russia	**98,909**	**1,354**	**100,263**
	175,810	**1,354**	**177,164**
Timing of revenue recognition			
A point of time	**153,708**	**–**	**153,708**
Over time	**22,102**	**1,354**	**23,456**
	175,810	**1,354**	**177,164**

5. REVENUE (CONTINUED)

(i) Disaggregation of revenue from contracts with customers (Continued)

For the year ended 31 December 2018

Segments	Mine in production US$'000	Engineering US$'000	Total US$'000
Types of goods or services			
Sale of iron ore concentrate	135,075	–	135,075
Delivery services	15,923	–	15,923
Engineering services	–	551	551
	150,998	551	151,549
Geographical markets			
PRC	83,388	–	83,388
Russia	67,610	551	68,161
	150,998	551	151,549
Timing of revenue recognition			
A point of time	135,075	–	135,075
Over time	15,923	551	16,474
	150,998	551	151,549

Sale of iron ore (revenue recognised at a point of time)

Revenue from the sale of iron ore products is recognised at a point of time when the control of the goods has been transferred to the customers, being when the iron ore has been delivered to the agreed location. Customers have to make a deposit of 90% of the invoiced amount before the delivery and the remaining 10% is to be paid after delivery and on receipt of the final assay results based on the average market price of the month of shipment. Upon delivery of the goods, the customers have control over the usage of the products and bear the risk of loss in relation to the goods.

Sale of iron ore with delivery service (multiple performance obligation)

The Group provides a delivery service associated with the sale of iron ore as a performance obligation separate to the sale of goods. The Group allocates the price of the relevant sale transaction between the goods sold and the distinct performance obligations related to the delivery of the goods and recognises the corresponding revenue over the period of the performance obligation if the amount is significant. Allocation of transaction price to delivery services is based on the best estimate of a similar stand-alone service.

Engineering services

Revenue from provision of engineering services is recognised over time by reference to the progress towards complete satisfaction of the relevant performance obligation, as the customer simultaneously receives and consumes the benefits provided by the Group's performance as the Group performs.

All iron ore sales (including delivery service) and engineering services are for periods of the year or less. As permitted under HKFRS 15, the transaction price allocated to these unsatisfied contracts is not disclosed.

6. SEGMENT INFORMATION

HKFRS 8 *Operating Segments* requires the Group to disclose reportable segments in accordance with internal reports that are provided to the Group's chief operating decision maker. The Group considers its Executive Committee to be the chief operating decision maker. For management purposes, the Group is organised into four operating segments, Mines in Production, Mines in Development, Engineering, and Other. These operating segments form the basis on which the Group's Executive Committee makes decisions about resource allocation and performance assessment. No operating segments identified by the Group's Executive Committee have been aggregated in arriving at the reportable segments of the Group. The Group has four operating and reportable segments under HKFRS 8:

- Mines in production segment ("Mines in production"), comprises an iron ore project in production phase. This segment includes the K&S Project which is located in the Russia Far East Region started commercial production in January 2017.

- Mines in development segment ("Mines in development"), comprises iron ore projects in the exploration and development phase. This segment includes the Garinskoye project and the Bolshoi Seym project which are all located in the Russia Far East region.

- Engineering segment ("Engineering"), comprises in-house engineering and scientific expertise related to Giproruda, which is located in Russia.

- Other segment ("Other") primarily includes Kuranakh Project, which has been under care and maintenance and did not generate any income in 2019. For management purpose, the project is reclassified from the "Mine in Production" segment to "Other" segment. This segment also includes the Group's interests in a joint venture for the production of vanadium pentoxides and related products in the PRC.

The accounting policies of the operating segments are the same as the Group's accounting policies described in note 3. Segment results represent the results generated by each segment without the allocation of general administration expenses, general depreciation, other income, gains and losses, allowance for financial assets measured at amortised cost, financial income and financial expenses.

Segment results represent the results incurred by each segment for the purpose of monitoring segment performance and performance assessment.

For the purposes of monitoring segment performance and allocating resources between segments:

- all assets are allocated to reportable segments other than central cash and cash equivalents; and

- all liabilities are allocated to reportable segments other than deferred tax liabilities and borrowings.

The following is an analysis of the Group's revenue and results by separable and reportable segment.

6. SEGMENT INFORMATION (CONTINUED)

For the year ended 31 December 2019

	Mines in production US$'000	Mines in development US$'000	Engineering US$'000	Other US$'000	Total US$'000
Revenue					
External sales	175,810	–	1,354	–	177,164
Segment revenue	175,810	–	1,354	–	177,164
Site operating expenses and service costs	(159,677)	(268)	(1,977)	(1,502)	(163,424)
Site operating expenses and service costs include:					
Depreciation and amortisation	(27,987)	(182)	(129)	–	(28,298)
Segment profit (loss)	16,133	(268)	(623)	(1,502)	13,740
General administrative expenses					(10,667)
General depreciation					(206)
Other income, gains and losses					(4,250)
Allowance for financial asset measured at amortised cost					(23)
Financial costs					(40,421)
Loss before taxation					(41,827)
Other segment information					
Additions to non-current assets:					
Capital expenditure on property, plant and equipment	7,526	2,287	1	126	9,940
Exploration and evaluation expenditure capitalised	–	380	–	–	380
Right-of-use assets capitalised	61	–	–	282	343
Segment assets	574,808	24,370	5,307	1,104	605,589
Central cash and cash equivalents					1,841
Consolidated assets					607,430
Segment liabilities	(65,970)	(5,126)	(428)	(33,476)	(105,000)
Borrowings					(221,907)
Deferred tax liabilities					(2,522)
Consolidated liabilities					(329,429)

6. SEGMENT INFORMATION (CONTINUED)

For the year ended 31 December 2018

	Mines in production US$'000	Mines in development US$'000	Engineering US$'000	Other US$'000	Total US$'000
Revenue					
External sales	150,998	–	551	–	151,549
Segment revenue	150,998	–	551	–	151,549
Site operating expenses and service costs	(136,700)	(320)	(1,431)	(2,202)	(140,653)
Site operating expenses and service costs include:					
Depreciation and amortisation	(20,862)	(196)	(141)	–	(21,199)
Reversal of impairment losses	90,483	–	–	–	90,483
Segment profit (loss)	104,781	(320)	(880)	(2,202)	101,379
General administrative expenses					(10,426)
General depreciation					(9)
Other income, gains and losses					6,811
Allowance for financial asset measured at amortised cost					(7,741)
Financial costs					(21,679)
Profit before taxation					68,335
Other segment information					
Additions to non-current assets:					
Capital expenditure on property, plant and equipment	469	5,268	2	10	5,749
Exploration and evaluation expenditure capitalised	–	348	–	–	348
Segment assets	575,370	24,293	4,598	1,006	605,267
Central cash and cash equivalents					4,693
Consolidated assets					609,960
Segment liabilities	(43,975)	(681)	(334)	(29,026)	(74,016)
Borrowings					(212,869)
Deferred tax liabilities					(3,565)
Consolidated liabilities					(290,450)

6. SEGMENT INFORMATION (CONTINUED)

Non-current assets by location of asset

The Group's non-current assets, excluding financial assets, are substantially located in Russia.

Information about major customers

Revenue from customers contributing over 10% of the total sales of the Group are as follows:

	2019 US$'000	2018 US$'000
EVRAZ Group	98,909	66,801
Heilongjiang Xianglong International Trading Corporation Limited	75,186	62,470
Suifenhe Fangda International Trade Co., Ltd.	–	21,387

7. OPERATING EXPENSES

	2019 US$'000	2018 US$'000
Site operating expenses and service costs[(a)]	163,424	140,653
General administration expenses[(b)]	10,873	10,435
	174,297	151,088

7. OPERATING EXPENSES (CONTINUED)

(a) Site operating expenses and service costs

	2019 US$'000	2018 US$'000
Subcontracted mining costs and engineering services	**46,601**	35,595
Railway tariffs	**38,315**	33,659
Depreciation and amortisation	**28,298**	21,199
Staff costs	**20,200**	19,222
Materials usage	**13,570**	11,779
Electricity	**6,876**	7,848
Property tax	**5,795**	6,650
Other expenses	**5,552**	3,791
Fuel	**1,992**	2,287
Professional fees*	**1,847**	645
Rental fee	**1,056**	3,433
Royalties	**497**	–
Office costs	**337**	350
Insurance	**171**	189
Bank charges	**131**	96
Business travel expenses	**43**	53
Mine development costs capitalised in property, plant and equipment	**(2,591)**	(2,079)
Movement in finished goods and work in progress	**(5,266)**	(4,064)
	163,424	140,653

(b) General administration expenses

	2019 US$'000	2018 US$'000
Staff costs	**6,466**	6,768
Professional fees*	**2,798**	2,255
Business travel expenses	**405**	385
Rental fee	**269**	351
Office costs	**269**	303
Other expenses	**220**	150
Depreciation	**206**	9
Bank charges	**136**	122
Insurance	**104**	91
Property tax	**–**	1
	10,873	10,435

* Professional fees comprise audit fees, legal fees, consulting fees, management services fees and engineering consultancy fees.

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8. IMPAIRMENT LOSSES, NET OF REVERSAL

The Group follows the requirements of *HKAS 36 Impairment of Assets* to consider whether there are impairment indicators and if so, to determine whether the non-financial assets are impaired. At the end of each reporting period, the management assesses whether there is any indication that the impairment loss recognised in prior periods for an asset other than goodwill may no longer exist or may have decreased. If any such indication exists, the management is required to estimate the recoverable amount of the asset which requires significant judgment. In making this judgment, management considers factors including changes in the cash costs of production, available ore reserves, purity of the iron ore concentrates, forecasted iron and ilmenite prices and exchange rates.

With the continued improvements in K&S Project's production and in the spot iron ore price during the year ended 31 December 2018, management revisited the assessment of the recoverable amount of the K&S Project and resulted in a reversal of the impairment charge of US$90.5 million in the consolidated statement of profit or loss. No further impairment or reversal of impairment have been made in the current year.

The recoverable amount of the K&S Project has been determined based on value-in-use calculations. These calculations require the use of estimates of future cash flows based on projected income and expenses of the business and working capital needs that have taking into consideration the future economic conditions, expected production capacity, ore reserve estimates, iron ore prices and cost of production over the expected life of the mine. Management is also required to choose appropriate discount rates in order to calculate the present values of the cash flows. The discount rate used was 12% (2018: 12%). Changes in the key assumptions on which the recoverable amounts of the assets are based could significantly affect management's assessment.

As at 31 December 2019, the recoverable amount of the property, plant and equipment and right-of-use assets of the K&S Project is approximately US$519.1 million (2018: recoverable amount of the property, plant and equipment approximately US$524.8 million).

9. OTHER INCOME, GAINS AND LOSSES

	2019 **US$'000**	2018 US$'000
Net foreign exchange (loss) gain	**(6,181)**	4,553
Rental income	**1,539**	1,034
Net gain on disposal of property, plant and equipment	**451**	508
Interest income on cash and cash equivalents	**83**	79
Impairment loss of asset classified as held for sale	**(141)**	–
Others	**(1)**	637
	(4,250)	6,811

10. FINANCIAL COSTS

	2019 US$'000	2018 US$'000
Interest expense on borrowings	19,954	15,242
Guarantee fee	6,300	3,940
Finance expense on early repayment of bank loan	11,465	–
Interest expense on lease liabilities	1,200	–
Unwinding of discount on environmental obligation and long-term construction costs payable	1,502	2,497
	40,421	21,679

11. INCOME TAX (CREDIT) EXPENSE

	2019 US$'000	2018 US$'000
Current tax:		
Russia Corporate tax	59	30
Hong Kong Profits tax	–	25
United Kingdom Corporation tax	45	–
Cyprus Corporate tax	5	–
	109	55
Overprovision in prior year:		
Russia Corporate tax	(2,137)	–
Deferred tax (credit) expense (note 26)	(1,129)	75
	(3,157)	130

Russian Corporate tax is calculated at a rate of 20% of the estimated assessable profit for both years.

Based on the approved federal and regional laws in Russia, the K&S Project is considered to be an investment project and is eligible for income tax relief over 10 years starting from 2017. The K&S Project is exempted from Russian Corporate tax for the period from 2017 to 2021 and, will be taxed at a reduced rate of 10% for the following 5 years and increasing to 20% thereafter.

United Kingdom Corporation tax is calculated at 19% of the estimated assessable profit for the current year.

Cyprus Corporate tax is calculated at 12.5% of the estimated assessable profit for the current year.

11. INCOME TAX (CREDIT) EXPENSE (CONTINUED)

On 21 March 2018, the Hong Kong Legislative Council passed The Inland Revenue (Amendment) (No. 7) Bill 2017 (the "Bill") which introduces the two-tiered profits tax rates regime. The Bill was signed into law on 28 March 2018 and was gazetted on the following day. Under the two-tiered profits tax rates regime, the first HK$2 million of profits of the qualifying group entity will be taxed at 8.25%, and profits above HK$2 million will be taxed at 16.5%. The profits of group entities not qualifying for the two-tiered profits tax rates regime will continue to be taxed at a flat rate of 16.5%.

No tax from other jurisdictions has been recognised as the Group had no assessable profit arising in or derived from any other jurisdictions during both years. The (credit) charge for the year can be reconciled to (loss) profit before taxation per the consolidated statement of profit or loss as follows.

	2019 US$'000	2018 US$'000
(Loss) profit before taxation	**(41,827)**	68,335
Tax at the Russian corporation tax rate of 20%[a]	**(8,365)**	13,667
Tax effect of expenses that are not deductible in determining taxable profit	**10,657**	4,474
Tax effect of income that is not taxable in determining taxable profit	**(4,315)**	(19,755)
Tax effect of utilisation deductible temporary difference not recognised	**(3,838)**	–
Tax effect of income under tax exemption	**–**	(7,370)
Tax effect of tax losses not recognised	**5,298**	5,910
Tax effect of utilisation of tax losses previously not recognised	**(1,292)**	(883)
Effect of different tax rates of subsidiaries' operations in other jurisdictions	**(116)**	3,122
Tax effect arising from exchange adjustments on non-monetary assets	**951**	965
Overprovision in respect of prior years	**(2,137)**	–
Income tax (credit) expense for the year	**(3,157)**	130

(a) The Group's major operating subsidiaries are all located in Russia and subject to Russian Corporate tax. Accordingly, Russian Corporate tax rate is applied for tax reconciliation purposes.

12. AUDITORS' REMUNERATION

The analysis of auditors' remuneration is as follows:

	2019 US$'000	2018 US$'000
Audit fees		
Fees payable to Group's auditors and their associates for the annual audit of the Group's consolidated financial statements	**516**	510

13. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS

The aggregate remuneration of employees (including directors) comprised:

	2019	2018
	US$'000	US$'000
Wages and salaries	**19,065**	17,748
Social security and other benefits	**6,778**	6,117
Retirement benefit contributions	**172**	159
Share-based payments	**650**	1,966
	26,665	25,990

	2019	2018
	US$'000	US$'000
Directors' emoluments		
Emoluments for executive directors:		
– salaries and other benefits	**1,460**	1,320
– retirement benefit contributions	**99**	91
– share-based payments	**186**	550
Emoluments for non-executive directors:		
– directors' fees	**837**	875
– retirement benefit contributions	**–**	23
– share-based payments	**–**	275
	2,582	3,134

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13. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS (CONTINUED)

	2019				
	Directors' fees US$'000	Salaries and other benefits US$'000	Retirement benefit contributions US$'000	Share-based payments[g] US$'000	Total US$'000
Executive directors:					
Yury Makarov	–	708[i]	89	93	890
Danila Kotlyarov[a]	–	752	10	93	855
Non-executive directors:					
Non-executive directors					
Peter Charles Percival Hambro[b][j]	175	–	–	–	175
Cheng Chi Kin	90	–	–	–	90
Independent non-executive directors					
Daniel Bradshaw	140	–	–	–	140
Jonathan Martin Smith	126	–	–	–	126
Chuang-fei Li	126	–	–	–	126
Simon Murray	90	–	–	–	90
Raymond Woo[f]	90	–	–	–	90
	837	1,460	99	186	2,582

For the year ended 31 December 2019

13. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS (CONTINUED)

	2018				
	Directors' fees US$'000	Salaries and other benefits US$'000	Retirement benefit contributions US$'000	Share-based payments[g] US$'000	Total US$'000
Executive directors:					
Yury Makarov	–	708[i]	89	275	1,072
Danila Kotlyarov	–	612	2	275	889
Non-executive directors:					
Non-executive directors					
Peter Charles Percival Hambro[b)(j]	42	–	–	–	42
George Jay Hambro[c]	185[h]	–	23	275	483
Cheng Chi Kin	90	–	–	–	90
Cai Sui Xin[e]	–	–	–	–	–
Benjamin ng[d]	–	–	–	–	–
Independent non-executive directors					
Daniel Bradshaw	126	–	–	–	126
Jonathan Martin Smith	126	–	–	–	126
Chuang-fei Li	126	–	–	–	126
Simon Murray	90	–	–	–	90
Raymond Woo[f]	90	–	–	–	90
	875	1,320	114	825	3,134

Notes:

(a) Mr Danila Kotlyarov will relinquish his role as Executive Director, Chief Financial Officer and Authorised Representative of the Company with effect from 1 February 2020 to become the Chief Financial Officer of Petropavlovsk PLC, which is a substantial shareholder holding 31.10% of the issued share capital of the Company. On the same date, Mr Danila Kotlyarov will be re-designated as a Non-executive Director of the Company.

(b) Appointed as non-executive director on 26 July 2018.

(c) Resigned as non-executive director on 19 December 2018.

(d) Appointed as non-executive director on 5 January 2018 and retired on 26 June 2018.

(e) Resigned as non-executive director on 5 January 2018.

(f) Re-designated as independent non-executive director on 5 January 2018.

(g) The share-based payments were recognised in accordance with the accounting policies set out in note 3 and for further details, please refer to note 31.

(h) In 2018, included directors' fees of US$98,000 and retirement benefit contributions of US$23,000 paid to a service company which is an affiliated company of the director.

(i) Included in salaries was US$33,000 (2018: US$34,000) paid by subsidiaries.

(j) Director's fee was paid to an independent service company which is classed as an affiliated company to the director.

13. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS (CONTINUED)

The executive directors' emoluments shown above were for their services in connection with the management of the affairs of the Company and the Group.

The non-executive directors' emoluments shown above were for their services as directors of the Company or its subsidiaries.

The independent non-executive directors' emoluments shown above were for their services as directors of the Company.

Mr. Yury Makarov and Mr. Danila Kotlyarov are also the Chief Executive and the Chief Financial Officer of the Company respectively and their emoluments disclosed above include those for services rendered by them in these roles.

Five highest paid individuals

For the year ended 31 December 2019, the five highest paid individuals included three directors of the Company (2018: three directors of the Company). The emoluments of the remaining two (2018: two) highest paid individuals for the years ended 31 December 2019 and 2018 are as follows:

	2019 **US$'000**	2018 US$'000
Employees		
– salaries and other benefits	**557**	484
– share-based payments	**57**	184
	614	668
Their emoluments were within the following bands:		
HK$1,500,001 to HK$2,000,000 (equivalent to approximately US$192,308 to US$256,410)	**–**	1
HK$2,000,001 to HK$2,500,000 (equivalent to approximately US$256,411 to US$320,513)	**2**	–
HK$3,000,001 to HK$3,500,000 (equivalent to approximately US$384,615 to US$448,718)	**–**	1
	2	2

In both years, no emoluments were paid by the Group to the directors or the five highest paid individuals as an inducement to join or upon joining the Group. None of the directors waived or agreed to waive any emoluments and no other amounts were paid by the Group to the directors, or the five highest paid individuals, as compensation for loss of office during the year.

During the year, certain directors and employees were granted share options, in respect of their services to the Group under share options scheme of the Company. Details of the share option scheme are set out in note 31 to the Group's consolidated financial statements.

14. DIVIDENDS

No dividends were paid, declared or proposed to the owners of the Company during both years ended 31 December 2019 and 2018, nor has any dividend been proposed since the end of the reporting period.

15. (LOSS) EARNINGS PER SHARE

The calculation of the basic and diluted (loss) earnings per share attributable to owners of the Company is based on the following data:

(Loss) profit for the year

	2019 **US$'000**	2018 US$'000
(Loss) profit for the purposes of basic and diluted (losses) earnings per ordinary share being (loss) profit for the year attributable to owners of the Company	**(38,669)**	68,235

Number of shares

	2019 **Number** **'000**	2018 Number '000
Weighted average number of ordinary shares for the purpose of basic and diluted (loss) earnings per share	**7,093,386**	7,093,386

For the year ended 31 December 2019, the exercise of share options would result in a decrease in loss per share. The computation of diluted earnings per share for the year ended 31 December 2018 does not assume the exercise of share options granted by the Group. The exercise price of those options was higher than the average market price for the Company's shares.

16. EXPLORATION AND EVALUATION ASSETS

	2019 **US$'000**	2018 US$'000
At the beginning of the year	**19,497**	19,149
Additions	**380**	348
At the end of the year	**19,877**	19,497

Garinskoye and Bolshoi Seym Deposit are classified as exploration and evaluation assets. Additions mainly related to capitalised costs incurred on exploration and evaluation activities.

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17. PROPERTY, PLANT AND EQUIPMENT

	Mine development costs US$'000	Mining assets US$'000	Non-mining assets US$'000	Construction in progress US$'000	Total US$'000
COST					
At 1 January 2018	377,975	1,002,619	43,437	15,552	1,439,583
Additions	5,268	469	12	–	5,749
Transfers	2,208	(24,050)	21,842	–	–
Disposals	(1,006)	(19,111)	(874)	(1,100)	(22,091)
Exchange adjustments	–	–	(969)	–	(969)
At 31 December 2018	384,445	959,927	63,448	14,452	1,422,272
Additions	2,287	7,526	127	–	9,940
Transfers	(3,919)	3,919	–	–	–
Disposals	–	(169)	(185)	–	(354)
Reclassified as asset held for sale	–	–	(8,299)	–	(8,299)
Exchange adjustments	–	–	566	–	566
At 31 December 2019	382,813	971,203	55,657	14,452	1,424,125
ACCUMULATED DEPRECIATION AND IMPAIRMENT					
At 1 January 2018	(358,161)	(571,702)	(35,101)	(15,501)	(980,465)
Depreciation charge for the year	–	(19,424)	(1,784)	–	(21,208)
Impairment loss reversed in profit or loss, net	(88)	90,622	–	(51)	90,483
Eliminated on disposals	997	19,100	874	1,100	22,071
Exchange adjustments	–	–	293	–	293
At 31 December 2018	(357,252)	(481,404)	(35,718)	(14,452)	(888,826)
Depreciation charge for the year	–	(24,142)	(973)	–	(25,115)
Eliminated on disposals	–	52	133	–	185
Reclassified as asset held for sale	–	–	3,113	–	3,113
Exchange adjustments	–	–	(176)	–	(176)
At 31 December 2019	(357,252)	(505,494)	(33,621)	(14,452)	(910,819)
CARRYING AMOUNTS					
At 31 December 2019	25,561	465,709	22,036	–	513,306
At 31 December 2018	27,193	478,523	27,730	–	533,446

At 31 December 2019 and 2018, the Group did not have any material contractual commitments for the acquisition of property, plant and equipment.

18. ASSET CLASSIFIED AS HELD FOR SALE

On 13 December 2019, LLC GMMC, a wholly-owned subsidiary of the Company, entered into the sale and purchase agreement with a purchaser (the "Purchaser"), a related party of the Company. Pursuant to the sale and purchase agreement, LLC GMMC agreed to sell, and the Purchaser agreed to purchase, a helicopter for a consideration of RUB316,667,000 (equivalent to approximately US$5,045,000). the net proceeds of disposal are less than the carrying amount of the relevant asset and accordingly, an impairment loss of US$141,000 has been recognised.

The major classes of assets classified as held for sale are as follows:

	At 31 December 2019 US$'000	At 31 December 2018 US$'000
Total assets classified as held for sale		
Property, plant and equipment	**5,045**	–

19. RIGHT-OF-USE ASSETS

	Mining assets US$'000	**Non-mining assets US$'000**	**Total US$'000**
COST			
At 1 January 2019	**12,804**	**–**	**12,804**
Additions	**61**	**282**	**343**
Modifications	**(533)**	**–**	**(533)**
At 31 December 2019	**12,332**	**282**	**12,614**
ACCUMULATED DEPRECIATION			
At 1 January 2019	**–**	**–**	**–**
Charge for the year	**(3,190)**	**(199)**	**(3,389)**
Eliminated on modifications	**109**	**–**	**109**
At 31 December 2019	**(3,081)**	**(199)**	**(3,280)**
CARRYING AMOUNTS			
At 31 December 2019	**9,251**	**83**	**9,334**

19. RIGHT-OF-USE ASSETS (CONTINUED)

	2019 US$'000
Total cash outflows for leases	5,478

During both years, the Group leased an office, equipment and vehicles for its operations. Lease contracts are entered into for a fixed term ranging from 2 years to 4 years, and do not have extension options. Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. In determining the lease term and assessing the length of the non-cancellable period, the Group applies the definition of a contract and determines the period for which the contract is enforceable.

20. TRADE AND OTHER RECEIVABLES

	2019 US$'000	2018 US$'000
Trade receivables	3,190	2,227
Value-added tax recoverable	4,429	3,762
Prepayments to suppliers	4,094	2,867
Amounts due from customers under engineering contracts	36	204
Other receivables	2,552	1,967
	14,301	11,027

Amounts due from customers under long-term engineering contracts in progress are expected to be billed and settled within one year.

Trade receivables are amounts owed from iron ore concentrate sales and services performed under engineering contracts.

Below is an aged analysis of the Group's trade receivables based on invoice date at the end of the reporting period.

	2019 US$'000	2018 US$'000
Less than one month	3,156	2,222
One month to three months	34	5
Total	3,190	2,227

The Group allows credit period of 5 to 30 days (2018: 5 to 30 days) to individual third party customers. The directors of the Company considered that the carrying value of trade and other receivables is approximately equal to their fair value.

20. TRADE AND OTHER RECEIVABLES (CONTINUED)

As at 31 December 2019, there are no trade receivables which are past due as at the reporting date. As at 31 December 2018, 99% of the trade receivables that are neither past due nor impaired are considered to be of good credit quality based on their settlement history.

The Group has a concentration of credit risk at 31 December 2019 as 86.1% (31 December 2018: 91.4%) of the total trade receivables was due from the Group's largest customer. The Group has implemented policies that require appropriate credit checks on potential customers before granting credit. The Group has adopted a policy of only dealing with creditworthy counterparties and minimising its risk by receiving substantial upfront payments. The Group's exposure and credit ratings of its counterparties are monitored closely by management. The maximum credit risk of such financial assets is represented by the carrying value of the asset.

In determining recoverability of a trade receivable, the Group considers any change in the credit quality of the trade receivable from the date credit was initially granted up to the end of the reporting period.

Details of impairment assessment of other receivables for the years ended 31 December 2019 are set out in note 36.

21. INVENTORIES

	2019 **US$'000**	2018 US$'000
Current		
Stores and spares	**11,222**	10,485
Work in progress	**11,916**	10,992
Finished goods	**2,153**	1,691
	25,291	23,168

	2019 **US$'000**	2018 US$'000
Non-current		
Ore in stockpiles (note)	**14,804**	10,926

Note: Ore in stockpiles that is not planned to be processed within twelve months after the reporting period is shown as non-current.

No inventories had been pledged as security during the years ended 31 December 2019 and 2018.

No inventories were written down or recovered to its net realisable value during the year ended 31 December 2019 and 31 December 2018.

The cost of inventory, excluding iron ore, charged to the consolidated statement of profit or loss and included in site operating expenses and service costs was approximately US$12,451,000 for the year ended 31 December 2019 (2018: US$11,716,000).

22. TIME DEPOSITS

As at 31 December 2019, the Group had short-term US Dollars denominated bank deposits with an original maturity of three to twelve months and bore interest at prevailing market rates that ranged from 5.2% to 7.24% per annum (2018: nil).

23. BANK BALANCES

Bank balances comprised cash and short-term bank deposits with an original maturity of three months or less. The carrying amount of these assets approximates their fair value. Cash at banks carry interest at prevailing market rates ranged from 0.55% to 5.73% (2018: 0.55% to 6.15%) per annum as at 31 December 2019.

As of 31 December 2019, the bank balances of US$3,631,000 (2018:US$7,637,000) include US$1,145,000 (2018: US$1,951,000) held by LLC KS GOK, a wholly owned subsidiary of the Group.

24. TRADE AND OTHER PAYABLES

	2019	2018
	US$'000	US$'000
Trade payables	**10,107**	8,188
Advances from customers	**682**	229
Interest payables	**576**	339
Construction cost payables (Note)	**22,694**	22,092
Accruals and other payables	**38,269**	32,850
	72,328	63,698
Presented as:		
Current liabilities	**72,328**	54,788
Non-current liabilities	**–**	8,910
	72,328	63,698

The average credit period on purchases of goods and services for the year was 12 days (2018: 11 days).

The directors of the Company consider that the carrying amount of trade creditors and other payables approximates their fair value.

24. TRADE AND OTHER PAYABLES (CONTINUED)

Below is an aged analysis of the Group's trade creditors based on invoice date:

	2019	2018
	US$'000	US$'000
Less than one month	**6,722**	6,058
One month to three months	**3,159**	1,922
Over three months to six months	**125**	131
Over six months	**101**	77
Total	**10,107**	8,188

Note:

Construction cost payables are amounts owed arising from the Engineering Procurement and Construction Contract (the "EPC Contract") entered into between the Group and China National Electric Engineering Corporation ("CNEEC") on 6 December 2010.

The EPC Contract was amended on 14 March 2016 such that LLC KS GOK shall issue a taking-over certificate for the process plant works ("Taking-Over Certificate") on 30 June 2016 to confirm the status of completion of the processing plant. However, the Group had to complete certain works itself, and the time for completion of the K&S Project had been extended from 30 June 2016 to 26 July 2016.

Under the EPC Contract, CNEEC is subject to delay penalties on demand basis for the period between the completion date of the infrastructure works and the date of the issuance of the Taking-Over Certificate for the process plant works at US$150,000 per day and the Group may recover the same from CNEEC as a debt. On this basis, a delay penalty amounting to US$3,900,000 has been charged to CNEEC (the "Delay Penalty") in respect of the delay of completion of the processing plant from 30 June 2016 to 26 July 2016.

On 27 December 2016, the Group and CNEEC entered into an additional agreement (the "Additional Agreement") to the EPC Contract that the Taking-Over Certificate would be issued on 31 December 2016.

On the other hand, the Group is obliged to give CNEEC a final payment of the construction costs of US$26,594,000 for which CNEEC agreed to receive the payment in tranches at US$8,396,000, US$9,099,000 and US$9,099,000 in 2018, 2019 and 2020 respectively. In particular, CNEEC has agreed to partially offset the final payment of the construction costs with the Delay Penalty of US$3,900,000 and the remaining payment of US$22,694,000 has been measured at amortised cost determined using an effective interest method with an interest rate of 8.16% per annum.

As at 31 December 2019, the Group has made a counter claim, consists of i) delay penalties in respect of the period from 26 July 2016 until 31 December 2016; ii) performance penalties; and iii) reimbursement of the costs of remedical works, amounting to approximately US$64,885,000 against CNEEC and is currently going through the arbitration process.

25. SHARE CAPITAL

Details of the allotment and issuance of ordinary shares by the Company during the years ended 31 December 2019 and 2018 are as follows:

	Number of shares	Share capital US$'000
Issued and fully paid		
At 1 January 2018, 31 December 2018 and 2019	7,093,386,381	1,285,158

On 30 November 2016, the Company entered into a subscription agreement with an investor, Tiger Capital Fund SPC – Tiger Global SP ("Tiger Capital Fund"), pursuant to which Tiger Capital Fund agreed to subscribe for 937,500,000 new ordinary shares of the Company at the subscription price of HK$0.21 per share. As part of the consideration for the subscription, the Company has also agreed to grant to Tiger Capital Fund a right to subscribe for a maximum of 60,000,000 new ordinary shares ("Option Share(s)") of the Company. The subscription and the grant of the Option Shares were subject to shareholders' approval by way of an ordinary resolution which was passed on 29 December 2016. Accordingly, 937,500,000 ordinary shares were allotted and issued, as well as 60,000,000 Option Shares were granted, to Tiger Capital Fund on 30 December 2016 (the "Completion Date") for a total net proceeds of approximately US$25.4 million.

The 60,000,000 Option Shares granted were assigned to a director of Tiger Capital Fund, pursuant to the nomination by Tiger Capital Fund. The first tranche of 30,000,000 Option Shares has an exercise price of HK$0.3575, representing a premium of 10% to the closing price of HK$0.325 on the Completion Date. Following the completion of the first tranche of the Option Shares subscription, the exercise price for the second tranche of the remaining 30,000,000 Option Shares was set at a price being 110% of the closing price for a share of the Company on the first anniversary of the Completion Date.

The Option Shares are valid for a period of 5 years from the date of grant and have been fully vested in 2017.

At 31 December 2019 and 2018, the 60,000,000 Option Shares granted to Tiger Capital Fund, representing 0.85% of the issued shares of the Company as at 31 December 2019 (31 December 2018: 0.85%), remained outstanding. No Option Shares granted were exercised or lapsed during the year ended 31 December 2019.

26. DEFERRED TAX LIABILITIES

The following are the major deferred tax (liabilities) assets recognised by the Group and movements thereon during the year.

	Property, plant and equipment US$'000	Engineering contracts US$'000	Tax losses US$'000	Foreign exchange movements US$'000	Other temporary differences US$'000	Total US$'000
At 1 January 2018	(753)	26	49,279	(52,075)	(100)	(3,623)
Credit (charge) to profit or loss	25	28	(1,113)	965	19	(76)
Exchange adjustments	126	(7)	–	–	15	134
At 31 December 2018	(602)	47	48,166	(51,110)	(66)	(3,565)
Credit (charge) to profit or loss	23	(51)	161	951	45	1,129
Exchange adjustments	(72)	4	–	–	(18)	(86)
At 31 December 2019	(651)	–	48,327	(50,159)	(39)	(2,522)

At 31 December 2019 and 2018, the Group had unused tax losses of approximately US$378,201,000 and US$357,372,000 respectively.

On 30 November 2016, an amendment to the Russian Tax Code was enacted that, effective from 1 January 2017 (i) the limitation regarding the utilisation of loss carry forwards up to 50% of taxable profit in the tax period will expire beginning in 2021; and (ii) the current 10-year carry forward period for losses will be eliminated, hence, it will be possible to fully utilise loss carry forwards against the corporate tax base in a given year from 2021 onwards. Further losses incurred from 2007 can be carried forward for an indefinite period until fully utilised.

In relation to these unused tax losses, deferred tax assets of US$161,000 have been credited in 2019 in respect of approximately US$241,638,000 of unused tax losses and US$1,113,000 have been utilised in 2018 in respect of approximately US$240,835,000 of unused tax losses. No deferred tax asset has been recognised in respect of the remaining tax losses of approximately US$136,563,000 (2018: US$116,537,000) due to the unpredictability of future taxable profit streams.

At 31 December 2019, the Group had deductible temporary difference of approximately US$2,081,000, in respect of temporary differences arising on the sale of iron ore and certain costs capitalised within "Mine development costs" under property, plant and equipment when they were under development in prior years (2018: approximately US$21,269,000). No deferred tax asset has been recognised in respect of these deductible temporary differences due to the unpredictability of future taxable profit streams.

The Group did not record a deferred tax liability in respect of withholding tax that would be payable on the unremitted earnings associated with investments in its subsidiaries as the Group is able to control the timing of the reversal of those temporary differences and did not intend to reverse them in the foreseeable future. These subsidiaries are incorporated in Russia and subject to the Russian Corporate tax rate of 20%. Unremitted earnings that would be subject to withholding tax amount to approximately US$3,394,000 at 31 December 2019 (2018: approximately US$3,083,000).

Temporary differences arising from the Group's interests in a joint venture are insignificant.

For the year ended 31 December 2019

27. BORROWINGS

	2019 US$'000	2018 US$'000
Bank loans		
Gazprombank JSC	**221,849**	–
Industrial and Commercial Bank of China ("ICBC")	**–**	158,777
	221,849	158,777
Other loans		
EPC – Finance LLC	**58**	63
CJSC Pokrovskiy Rudnik	**–**	54,029
	58	54,092
Total	**221,907**	212,869
Secured	**221,849**	158,777
Unsecured	**58**	54,092
	221,907	212,869
Carrying amounts repayable		
Within one year	**20,703**	111,954
More than one year, but not exceeding two years	**20,375**	44,886
More than two years, but not exceeding five years	**61,125**	56,029
More than five years	**119,704**	–
Total	**221,907**	212,869
Presented as:		
Current liabilities	**20,703**	111,954
Non-current liabilities	**201,204**	100,915
	221,907	212,869

27. BORROWINGS (CONTINUED)

Bank loan from ICBC

The Group entered into a project finance facility agreement with ICBC (the "ICBC Facility Agreement") on 13 December 2010 pursuant to which ICBC lent US$340,000,000 to LLC KS GOK to fund the construction of the Group's mining operations at K&S Project in time for the start of major construction works in early 2011. The whole facility amount was originally repayable semi-annually in 16 instalments of US$21,250,000 each, starting from December 2014 and would be fully repayable by June 2022. On 27 February 2017, ICBC agreed to restructure two repayment instalments originally due for payment on 20 June 2017 and 20 December 2017 in an aggregate amount of US$42,500,000 evenly into five subsequent semi-annual repayment instalments. As a result, each of the repayment instalments due on 20 June 2018, 20 December 2018, 20 June 2019, 20 December 2019 and 20 June 2020 increased by US$8,500,000 to an amount equal to US$29,750,000.

The outstanding loan principal was US$169,637,000 as at 31 December 2018.

On 19 March 2019, the Group repaid the outstanding loan principal and interest in full and terminated the ICBC Facility Agreement.

Loan from EPC-Finance LLC

On 27 April 2018, LLC Petropavlovsk Iron Ore, a subsidiary of the Group, obtained an unsecured loan facility of RUB6,000,000 from EPC-Finance LLC, an independent third party. The loan carries interest of 11% per annum and is repayable on 27 April 2020. As at 31 December 2019, RUB3,580,000 (equivalent to US$58,000) had been drawn down.

Loan from CJSC Pokrovskiy Rudnik

On 13 June 2018, the Group obtained an unsecured short-term loan of RUB1,877,712,900 (equivalent to US$29,750,000) from CJSC Pokrovskiy Rudnik, a subsidiary of Petropavlovsk PLC. The loan carried interest of 12% per annum and was repaid in full on 21 March 2019.

On 18 December 2018, the Group obtained a second unsecured short-term loan of RUB1,798,712,000 (equivalent to US$27,000,000) from CJSC Pokrovskiy Rudnik. The loan carried interest of 16% per annum and was repaid in full on 21 March 2019.

On 21 March 2019, having repaid the outstanding loan principal and interest in full, the Group terminated the credit facility.

Bank loan from Gazprombank JSC

On 18 December 2018, the Group entered into two facility agreements for a loan in aggregate of US$240,000,000 (the "Gazprombank Facility"). The Gazprombank Facility will mature in 2026 and consists of two tranches. The principal under the first tranche amounts to US$160,000,000 with interest being charged at the Londen 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$80,000,000 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 quarterly payments during the term of the Gazprombank Facility.

27. BORROWING (CONTINUED)

Loan from Gazprombank JSC (Continued)

On 19 March 2019, the Group drew down on the Gazprombank Facility to repay the bank loan from ICBC in full of approximately US$169,637,000 and to finance the K&S Project's working capital of approximately US$3,000,000.

On 21 March 2019, the Group further drew down on the Gazprombank Facility to repay the loans from CJSC Pokrovskiy Rudnik in full of approximately US$56,211,000.

The remaining amounts of the Gazprombank Facility have been drawn down and used for the following purposes: (i) to finance the K&S Project's working capital of approximately US$5,000,000 and (ii) to repay part of the guarantee fee of approximately US$6,000,000 owed by the Group to Petropavlovsk PLC in respect of their guarantee of the ICBC Facility Arrangement.

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

The Gazprombank Facility is secured by i) a charge over the property, plant and equipment with net book value of US$27,021,000, ii) 100% equity interest in LLC KS GOK held by Kapucius Services Limited and iii) a guarantee from Petropavlovsk PLC.

The drawn down of the Gazprombank Facility is subject to the following requirements:

a) LLC KS GOK must maintain an authorised capital not less than RUB9.1 billion;

b) LLC KS GOK must provide quarterly reporting; and

c) LLC KS GOK must meet the following financial covenants:

  i) Net Debt/EBITDA ratio:

  - For the twelve months period ended on 30 June 2019 and 31 December 2019 of less than 6.5 times
  - For the twelve months period ending 30 June 2020 and 31 December 2020 of less than 5.0 times
  - For the twelve months period ending 30 June 2021 and 31 December 2021 of less than 3.5 times and,
  - Starting from the twelve months period ending on 30 June 2022, of less than 3.0 times

  Where:

  – Net Debt is defined as short-term borrowed funds add long-term borrowed funds add leasing obligations less cash or cash equivalents; and

  – EBITDA is defined as profit before tax for the last twelve months add interest expenses for the last twelve months less interest incomes for the last twelve months add depreciation for the last twelve months add adjustments to exclude exchange rate revaluation and other non-monetary items for the last twelve months and add lease payments for the last twelve months.

27. BORROWING (CONTINUED)

Loan from Gazprombank JSC (Continued)

c) LLC KS GOK must meet the following financial covenants: (Continued)

ii) Debt Service Coverage Ratio (DSCR):

- For the twelve months period ended on 30 June 2019 or 31 December 2019 – not less than 1.1 times
- Starting from the twelve months period ending on 30 June 2020 – not less than 1.2 times

where DSCR is defined as

– Incoming cash balance add free cash flow of the company to the share capital add cash payments for servicing the principal debt add Cash payments for interest payments; divided by

– Cash payments for servicing the principal debt add cash payments for interest payments

For the twelve months period ended 30 June 2019, Gazprombank JSC has granted LLC KS GOK waivers to comply with the Net Debt/EBITDA ratio and the DSCR covenants.

For the year ended 31 December 2019, LLC KS GOK has complied with the Net Debt/EBITDA ratio covenant. Gazprombank JSC has granted LLC KS GOK a waiver to comply with the DSCR covenant for the year ended 31 December 2019.

As of 31 December 2019, the total borrowings of US$221,849,000, (31 December 2018: US$158,777,000) was borne by LLC KS GOK, a wholly owned subsidiary of the Group.

Details of the guarantee granted by Petropavlovsk PLC in relation to the Gazprombank Facility Agreement are set out in notes 10 and 37. For a period of not less than twelve months from the date of issuing the consolidated financial statements of the Group as at and for the year ended 31 December 2019, Petropavlovsk PLC has agreed to provide funds to service any shortfall between the Group's cash flows and amounts required to meet its obligations under the Gazprombank Facility.

28. OTHER FINANCIAL LIABILITIES

	Current	
	2019	2018
	US$'000	US$'000
Other financial liabilities		
Derivatives under hedge accounting		
Cash flow hedges – Commodity Swap Contracts	**4,285**	–

28. OTHER FINANCIAL LIABILITIES (CONTINUED)

Cash flow hedges

At 31 December 2019, the Group had outstanding commodity swap contracts designated as highly effective hedging instruments in order to manage the Group's iron ore price exposure in relation to iron ore forecast sales.

The fair value of commodity swap contracts as at 31 December 2019 are provided by counterparty financial institutions.

The terms of the commodity swap contracts have been negotiated to match the terms of the respective designated hedged items.

As at 31 December 2019, the aggregate amount of 890,000 tonnes of iron ore concentrate was hedged, including:

– 700,000 tonnes hedged using zero-cost collars strategy using options on the 62% iron ore index, with the weighted average strike of puts bought being US$70.6 per tonne and weighted average strike of calls sold being US$89.9;

– 130,000 tonnes hedged using swaps on the 62% iron ore index, with the weighted price of US$75.3 per tonne;

– 60,000 tonnes hedged using zero-cost collars strategy using options on the 65% iron ore index, with the weighted average strike of puts bought being US$82.0 per tonne and weighted average strike of calls sold being US$97.4.

During the year ended 31 December 2019, the loss on change in fair value of the commodity swap contracts under cash flow hedges amounting to US$27,581,000 (31 December 2018: gain on change in fair value of US$267,000) has been recognised in other comprehensive income, and the fair value losses of the hedging instruments amounting to US$23,296,000 (31 December 2018: US$1,585,000) were reclassified from hedging reserve to profit or loss in the same period when the hedged item affects profit or loss upon the settlement.

29. LEASE LIABILITIES

	2019 US$'000
Lease liabilities payable:	
Within one year	3,331
Within a period of more than one year but not more than two years	3,608
Within a period of more than two years but not more than five years	3,987
	10,926
Less: Amount due for settlement with 12 months shown under current liabilities	(3,331)
Amount due for settlement after 12 months shown under non-current liabilities	7,595

Lease obligations that are denominated in currencies other than the functional currencies of the relevant group entities are set out below:

	Russian Roubles US$'000	Hong Kong Dollars US$'000
As at 31 December 2019	10,842	84

30. PROVISION FOR CLOSE DOWN AND RESTORATION COSTS

	2019 US$'000	2018 US$'000
At the beginning of year	10,026	14,030
Unwinding of discount	899	937
Exchange adjustments	1,263	(2,492)
Change in estimate	5,273	(2,449)
At the end of year	17,461	10,026

The provision represents amounts recognised in relation to mine closure, site and environmental restoration costs which are based on estimates provided by in-house engineers and geologists.

The amount represents the obligation recognised for the Kuranakh Project, which is located in the Everyskya Avtononnaya Oblast of the Russian Federation, and the K&S Project. The Kuranakh Project had been put under a care and maintenance programme in March 2016. The related obligation for the Kuranakh Project has been recognised using an effective interest rate of 6.8% (2018: 6.8%) per annum with the expected timing of the cash outflows arising on the closure of mining operations to be incurred after 2021 and the K&S Project recognised at 6.5% (2018: 8.7%) per annum with the expected timing of cash outflows on the closure of mining operation currently estimated to be after 2041.

31. SHARE-BASED PAYMENTS TRANSACTIONS

Share Option Scheme

In November 2015, the Company adopted a share option scheme ("Share Option Scheme") for the primary purpose of providing incentives to directors and eligible employees that will expire on 19 November 2025. Under the Share Option Scheme, the Company's directors may, at their sole discretion, grant options (the "Options") to any directors and employees of the Group to subscribe for shares of the Company at a price which shall be at least the higher of (i) the closing price of shares of the Company as stated in the daily quotation sheet of the Stock Exchange on the day of the offer of grant; and (ii) the average closing price of the shares of the Company as stated in the Stock Exchange's daily quotation sheet for the five trading days immediately preceding the day of the offer of the grant. The Board shall specify in an offer letter a date by which a grantee must accept an offer, being a date no later than 28 days after the date on which the option is offered or the date on which the conditions for the offer are satisfied. Payment of an option price of HK$1.00 shall be made upon acceptance of the offer.

The total number of shares which may be issued upon exercise of all options to be granted under the Share Option Scheme and any other share option scheme of the Company must not, in aggregate, exceed 10% of the shares in issue on the date of commencement of dealings in the shares of the Company on the Stock Exchange, unless the Company obtains further approval from the shareholders.

The number of shares issued and to be issued in respect of which options granted and may be granted to any individual in any one year is not permitted to exceed 1% of the shares of the Company in issue at any point in time, without prior approval from the Company's shareholders. Options granted to substantial shareholders or independent non-executive directors in excess of 0.1% of the Company's share capital or with a value in excess of HK$5 million must be approved in advance by the Company's shareholders.

Notwithstanding the above, the maximum number of shares to be issued upon the exercise of all outstanding options granted and yet to be exercised under the Share Option Scheme and any other share option scheme of the Company must not, in aggregate, exceed 30% of the relevant shares or securities of the Company in issue from time to time.

Share Options granted in 2015

On 20 November 2015, 228,000,000 share options were granted to the Company's selected employees and directors. The exercise price is HK$0.315 per share, which was higher than the closing price of the Company's shares on the date of grant of HK$0.246 per share.

Of the total 228,000,000 share options, 87,000,000 share options were granted to directors of the Company, and 141,000,000 share options were granted to certain employees of the Group. The share options are valid for a period of 10 years from the date of grant and are subject to the vesting periods as follows:

– one-third of the Options granted to each Grantee shall vest on 19 November 2016;

– one-third of the Options granted to each Grantee shall vest on 19 November 2017; and

– one-third of the Options granted to each Grantee shall vest on 19 November 2018.

31. SHARE-BASED PAYMENTS TRANSACTIONS (CONTINUED)

Share Option Scheme (continued)

Share Options granted in 2015 (continued)

Each one-third tranche of the share options granted in 2015 are subject to the following vesting conditions:

– 25% of the tranche vesting relates to the achievement of certain production targets;

– 25% of the tranche vesting relates to profitability;

– 25% of the tranche vesting relates to the growth and development of the Group; and

– 25% of the tranche vesting relates to the meeting of certain health, safety and environmental requirements.

To address the dilutive effect of the Company's share placement which completed on 30 December 2016 (please refer to note 25 for details of the placement), the exercise price and the aggregate number of share options granted on 20 November 2015 have been adjusted to HK$0.296 and 242,328,035, respectively. One-third of the share options granted (80,776,011 share options) were due to vest in 2016, subject to the achievement of certain performance targets during the vesting period. However, as the K&S Project was not in commercial production so the grantees were not in the position to deliver on certain performance targets, the board of directors has determined that 50% of the share options that were due for vesting in 2016 (i.e. 40,388,008 share options) vested in 2017. As such, 40,388,003 share options vested in 2016 and became exercisable. However, in 2017, 15,499,783 share options were forfeited due to cessation of employment. One-third (37,288,055 share options) of the remaining share options (111,864,152 share options) due to vest in 2017 have been cancelled as approved by the remuneration committee of the Company and the effect of accelerating the expense is not significant.

During the year ended 31 December 2019, no (2018: 9,322,016) share options were cancelled. For the end of both years, the share options have been fully vested under the scheme. The number of exercisable share options under the scheme is 180,218,181 (2018: 180,218,181) as at 31 December 2019, representing 2.54% of the issued number of shares of the Company as at 31 December 2019 (31 December 2018: 2.54%). No share options granted in 2015 were exercised during the years ended 31 December 2019 and 2018.

Share Options granted in 2017

On 29 September 2017, 296,400,000 share options were granted to the Company's selected employees and directors. The exercise price is HK$0.2728 per share, which was higher than the closing price of the Company's shares on the date of grant of HK$0.248 per share.

Of the total 296,400,000 share options, 111,600,000 share options were granted to directors of the Company, and 184,800,000 share options were granted to certain employees of the Group. The share options are valid for a period of 5 years from the date of grant and are subject to the vesting periods as follows:

– one-third of the Options granted to each Grantee shall vest on 28 September 2018;

– one-third of the Options granted to each Grantee shall vest on 28 September 2019; and

– one-third of the Options granted to each Grantee shall vest on 28 September 2020.

31. SHARE-BASED PAYMENTS TRANSACTIONS (CONTINUED)

Share Option Scheme (continued)

Share Options granted in 2017 (continued)

Each one-third tranche of the share options granted in 2017 are subject to the following vesting conditions:

- 25% of the tranche vesting relates to the achievement of certain production targets;
- 25% of the tranche vesting relates to profitability;
- 25% of the tranche vesting relates to the growth and development of the Group; and
- 25% of the tranche vesting relates to the meeting of certain health, safety and environmental requirements.

In 2018, one-third of the share options granted (98,800,000 share options) were due to vest, subject to the achievement of certain performance targets during the vesting period. After assessing the level of achievement of the performance targets, 12,350,000 share options have been cancelled and 86,450,000 share options were vested.

In 2019, a further 24,800,000 share options were forfeited due to cessation of employment. One-third of the outstanding share options granted (86,400,000 share options) were due to vest, subject to the achievement of certain performance targets during the vesting period. After assessing the level of achievement of the performance targets, 43,200,000 share options have been vested, and 43,200,000 share options have been cancelled and the effect of accelerating the expense is not significant.

At 31 December 2019, 216,050,000 (2018: 284,050,000) share options granted remained outstanding under the scheme. The number of exercisable share options under the scheme is 129,650,000 (2018: 86,450,000) representing 1.83% of the issued number of shares of the Company as at 31 December 2019 (31 December 2018: 1.22%). No share options were exercised or lapsed during the year ended 31 December 2019.

The fair value of the share options granted during the year ended 31 December 2017 was approximately HK$34,829,000 and was determined using the Binomial valuation model by an independent valuer, RSM Consulting (Hong Kong) Limited with value per option in the range of HK$0.1096 to HK$0.1236. The significant inputs into the model are as follows:

Share price, at the grant date (HK$)	0.248
Exercise price (HK$)	0.2728
Expected volatility (%)	62.50
Expected dividend yield (%)	–
Expected share option life (years)	5
Annual risk-free interest rate (%)	1.29

The volatility measured at the standard deviation of continuously compounded share returns is based on statistical analysis of daily share prices over the previous five years at the date of the valuation.

The Binomial valuation model has been used to estimate the fair value of the options. The variables and assumptions used in computing the fair value of the share options are based on the directors' best estimate. The value of an option varies with different variables of certain subjective assumptions.

The expected share option life is based on the share option maturity period of 5 years.

The amount expensed under the Share Option Scheme during the year ended 31 December 2019 totalled US$650,000 (2018: US$1,966,000).

32. RETIREMENT BENEFIT SCHEMES

The Group operates a Mandatory Provident Fund Scheme ("MPF") for all qualifying employees in Hong Kong. The assets of the plans are held separately from those of the Group in funds under the control of trustees. The contributions charged to the consolidated statement of profit or loss for the year ended 31 December 2019 amounted to US$74,000 (2018: US$45,000) and represents contributions payable to these plans by the Group at rates specified in the rules of the plans.

The Group also operates an investment fund for its directors and the total amount is charged to the consolidated statement of profit or loss for the year ended 31 December 2019 is US$98,000 (2018: US$114,000).

As at 31 December 2019, contributions of US$12,000 (2018: US$6,000) due in respect of the year ended 31 December 2019 (2018) had not been paid over to the plans. The amounts were paid subsequent to the end of the reporting period.

33. NOTES TO THE CASH FLOW STATEMENTS

(a) Reconciliation of (loss) profit before taxation to cash generated from operations

	2019 **US$'000**	2018 US$'000
(Loss) profit before taxation	**(41,827)**	68,335
Adjustments for:		
Depreciation of property, plant and equipment	**25,115**	21,208
Depreciation of right-of-use assets	**3,389**	–
Financial income	**(83)**	(82)
Financial costs	**40,421**	21,679
Net gain on disposal of property, plant and equipment	**(451)**	(508)
Reversal of impairment losses	**–**	(90,483)
Share-based payments expense	**650**	1,966
Net foreign exchange loss (gain)	**6,181**	(4,555)
Impairment loss on General Nice	**–**	7,519
Impairment loss on asset held for sale	**141**	–
Other non-cash adjustments	**(6)**	(2,900)
Operating cash flows before movements in working capital	**33,530**	22,179
Increase in inventories	**(6,020)**	(4,982)
(Increase) decrease in trade and other receivables	**(1,596)**	4,899
Increase in trade and other payables	**6,513**	6,828
Net cash generated from operations	**32,427**	28,924

(b) Major non-cash transactions

There were no major non-cash transactions during the years ended 31 December 2019 and 2018.

For the year ended 31 December 2019

33. NOTES TO THE CASH FLOW STATEMENTS (CONTINUED)

(c) Reconciliation of liabilities arising from financing activities

The table below details changes in the Group's liabilities arising from financing activities, including both cash and non-cash changes. Liabilities arising from financing activities are those for which cash flows were, or future cash flows will be, classified in the Group's consolidated statement of cash flows as cash flows from financing activities.

	Borrowings US$'000 (Note 27)	Amount due to Petropavlovsk PLC included in other payables US$'000	Lease liabilities US$'000 (Note 29)	Total US$'000
At 1 January 2018	223,028	6,377	–	229,405
Financing cash flow	(22,478)	–	–	(22,478)
Interest expense	15,241	–	–	15,241
Loan guarantee fee	–	3,940	–	3,940
Exchange differences	(2,922)	–	–	(2,922)
At 31 December 2018	212,869	10,317	–	223,186
Adjustment upon application of HKFRS 16	–	–	12,804	12,804
At 1 January 2019 (restated)	**212,869**	**10,317**	**12,804**	**235,990**
Financing cash flow	**(24,346)**	**(6,000)**	**(4,153)**	**(34,499)**
Interest expense (borrowings)	**19,954**	**–**	**–**	**19,954**
Interest expense (leases)	**–**	**–**	**1,200**	**1,200**
Loan guarantee fee	**–**	**6,300**	**–**	**6,300**
Finance expenses on early repayment of bank loan	**11,465**	**–**	**–**	**11,465**
New leases entered	**–**	**–**	**343**	**343**
Lease modification	**–**	**–**	**(424)**	**(424)**
Other payables	**–**	**–**	**1,156**	**1,156**
Exchange differences	**1,965**	**–**	**–**	**1,965**
At 31 December 2019	**221,907**	**10,617**	**10,926**	**243,450**

34. OPERATING LEASE

The Group as a lessee

	2018
	US$'000
Minimum lease payments paid under operating leases during the year	3,784

The Group had commitments for future minimum lease payments under non-cancellable operating leases which fall due as follows:

	2018
	US$'000
Within one year	4,222
In the second to fifth year inclusive	12,678
	16,900

The Group as a lessor

The Group earned property rental income of US$1,539,000 during the year ended 31 December 2019 (2018: US$1,034,000), relating to the sub-let of part of the floor space of buildings owned by OJSC Giproruda, machineries and wagons subleased by LLC KS GOK, subsidiaries of the Group. At 31 December 2019 and 2018, the Group had contracted with tenants for minimum lease payments due within eleven months. The total minimum lease payment is approximately US$654,000 and US$451,000 as at 31 December 2019 and 2018, respectively.

	2019	2018
	US$'000	US$'000
Within one year	**654**	451

35. 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, which includes borrowings net of restricted bank deposit, time deposits, bank balances and equity attributable to owners of the Company, comprising issued capital and reserves.

36. FINANCIAL INSTRUMENTS

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 3 to the consolidated financial statements.

Categories of financial instruments

	Carrying value as at 31 December 2019 US$'000	Carrying value as at 31 December 2018 US$'000
Financial assets		
Financial assets at FVTPL	**3,190**	2,227
Financial assets at amortised cost	**6,880**	10,581
Financial liabilities		
Derivative instruments designated in cash flow hedge relationships	**(4,285)**	–
Amortised cost	**(278,071)**	(263,518)

Financial risk management objectives

The Group's activities expose it to other price risk, foreign currency risk, interest rate risk, 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.

Other price risk

The Group's trade receivables and derivative financial instruments are measured at fair value at the end of the reporting period. Therefore, the Group is exposed to commodity price risk in relation to the trade receivables and derivative financial instruments.

Sensitivity analysis

The Group's sensitivity to the trade receivables and derivative financial instrument is not significant.

36. FINANCIAL INSTRUMENTS (CONTINUED)

Foreign currency risk management

The group entities undertake certain transactions denominated in foreign currencies, principally Pounds Sterling, US$, Euros, Hong Kong Dollars ("HK$"), Renminbi and Russian Roubles, which exposes the Group to exchange rate risk associated with fluctuations in the relative values of Pounds Sterling, US$, Euros, HK$ and Russian Roubles.

Exchange rate risks are mitigated to the extent considered necessary by the board of directors of the Company, through holding the relevant currencies for future settlement. At present, the Group does not undertake any foreign currency transaction hedging.

The carrying amounts of the foreign currency denominated monetary assets and monetary liabilities of the Group at the reporting date are as follows:

	Assets		Liabilities	
	2019	2018	**2019**	2018
	US$'000	US$'000	**US$'000**	US$'000
Russian Roubles	**4,118**	5,852	**61,032**	48,782
US$	**19**	20	**–**	–
Renminbi	**16**	16	**–**	–
Pounds Sterling	**–**	–	**1**	59
Euros	**–**	–	**446**	448
HK$	**137**	269	**205**	20

Foreign currency sensitivity analysis

The Group is mainly exposed to exchange rate movements between US$ and Russian Roubles. The following table details the Group's sensitivity to a 25% (2018: 25%) change in exchange rate of functional currency (i.e. US$) of the group entities against the relevant foreign currency (i.e. Russian Roubles) for the year. The percentage change analysed represents management's assessment of a reasonably possible change in foreign currency rates. No sensitivity analysis is presented for foreign currency fluctuation between US$ against HK$ because HK$ is pegged to US$. The exposure to other currencies are limited, hence no sensitivity analysis is performed.

A positive number below indicates an increase in post-tax profit where the functional currency of the group entities strengthen 25% against Russian Roubles. For a 25% weakening of functional currency of the group entities against the relevant foreign currency, there would be an equal and opposite impact on the profit or loss.

	Russian Rouble currency impact	
	2019	2018
	US$'000	US$'000
Profit or loss	**11,383**	8,586

The Group's policy is to hold a portion of its cash equivalents in Russian Roubles to cover its exposure arising on capital and operational expenditures incurred in Russian Roubles.

36. FINANCIAL INSTRUMENTS (CONTINUED)

Interest rate risk management

The Group is exposed to fair value interest rate risk mainly in relation to fixed rate construction costs payable, borrowings (see note 27 for details), lease liabilities and cash flow interest rate risk in relation to variable-rate borrowings (see note 27 for details of these borrowings). The Group's policy is to maintain borrowings at variable rates.

The Group's exposure to interest rates on financial liabilities and lease liabilities are detailed in the liquidity risk management section of this note. The Group's cash flow interest rate risk is mainly concentrated on the fluctuation of LIBOR arising from the Group's US dollar denominated borrowings. The Group did not enter into any interest rate swaps to hedge against its exposure to cash flow interest risk.

The Group is also exposed to cash flow interest rate risk through the holding of cash and cash equivalents, restricted bank deposits and time deposits. The interest rates attached to these instruments are at floating rates.

If interest rates had been 100 basis points higher/lower, and all other variables were held constant, the Group's post-tax (loss) profit for the year ended 31 December 2019 would increase/decrease (2018: decrease/increase) by US$158,000 (2018: US$62,000).

Credit risk management and impairment assessment

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in financial loss to the Group. The Group has adopted a policy of only dealing with creditworthy counterparties. The Group's exposure and the credit ratings of the counterparties are monitored by the directors of the Company, and limits have been established to ensure that the aggregate value of transactions is spread amongst approved counterparties.

In order to minimise the credit risk, the management of the Group has delegated a team responsible for determination of credit limits and credit approvals. Before accepting any new customer, the Group uses an internal credit scoring system to assess the potential customer's credit quality and defines credit limits by customer. Limits and scoring attributed to customers are reviewed annually. Other monitoring procedures are in place to ensure that follow-up action is taken to recover overdue debts. In addition, except for trade receivables, measured at FVTPL, the Group performs impairment assessment for financial assets and other items under the ECL model using a provision matrix. In this regard, the directors of the Company consider that the Group's credit risk is significantly reduced.

The credit risk on bank deposits and bank balances is limited because the counterparties are banks with high credit ratings assigned by international credit-rating agencies.

Other than concentration of credit risk on liquid funds which are deposited with several banks with high credit ratings, the Group does not have any other significant concentration of credit risk.

36. FINANCIAL INSTRUMENTS (CONTINUED)

Credit risk management and impairment assessment (continued)

The Group's concentration of credit risk by geographical location is mainly in Russia, which accounted for 100% (31 December 2018: 100%) of the total trade receivables as at 31 December 2019.

The table below details the credit risk exposure of the Group's financial assets, which are subject to ECL assessment:

	Note	External credit rating	Internal credit rating	12-month or lifetime ECL	2019 Gross carrying amount US$'000	2018 Gross carrying amount US$'000
Financial assets at amortised cost						
Other receivables	(a)	N/A	Low	12-month ECL	**2,596**	1,967
Bank balances		AAA	N/A	12-month ECL	**3,631**	7,637
Short-term time deposits		AAA	N/A	12-month ECL	**661**	–
Restricted bank deposit		AAA	N/A	12-month ECL	**–**	977

Note:

(a) For the purpose of internal credit risk management, the Group uses both publicly available and past due information to assess whether credit risk has increased significantly since initial recognition.

2019	**Past due US$'000**	**Not past due US$'000**	**Total US$'000**
Other receivables	**–**	**2,596**	**2,596**

2018	Past due US$'000	Not past due US$'000	Total US$'000
Other receivables	–	1,967	1,967

36. FINANCIAL INSTRUMENTS (CONTINUED)

Credit risk management and impairment assessment (continued)

The following table shows the reconciliation of loss allowances that have been recognised for other receivables.

	12m ECL US$'000	Lifetime ECL (not credit -impaired) US$'000	Lifetime ECL (credit -impaired) US$'000	Total US$'000
As at 1 January 2018	–	2,900	–	2,900
Changes due to financial instruments recognised as at 1 January 2018:				
– Transfer to credit impaired	–	(2,900)	2,900	–
– Impairment loss recognised	–	–	7,519	7,519
Financial instruments recognised during the year	222	–	–	222
Write-off	–	–	(10,419)	(10,419)
As at 31 December 2018	**222**	**–**	**–**	**222**
Financial instruments recognised during the year	**23**	**–**	**–**	**23**
Write-off	**(237)**	**–**	**–**	**(237)**
As at 31 December 2019	**8**	**–**	**–**	**8**

Liquidity risk management

Ultimate responsibility for liquidity risk management rests with management. At 31 December 2019, the Group's principal financial liabilities include trade and other payables, borrowings, lease liabilities and derivative financial liabilities. The management of the Group monitors the level of liquid assets available to the Group and the level of funding required to meet its short, medium and long-term requirements. The following table details the Group's remaining contractual maturity for its non-derivative financial liabilities and derivative instruments. The table has been drawn up based on the undiscounted cash flows of non-derivative financial liabilities based on the earliest date on which the Group can be required to pay. The maturity dates for non-derivative financial liabilities are based on the agreed repayment dates.

The following tables include both interest and principal cash flows. To the extent that interest flows are floating rate, the undiscounted amount is derived from interest rate at the end of the reporting period.

36. FINANCIAL INSTRUMENTS (CONTINUED)

Liquidity risk management (continued)

In addition, the tables have also been drawn up based on the undiscounted contractual cash outflows on derivative instruments that settle on a net basis and the undiscounted gross outflows on these derivative instruments that require gross settlement. When the amount payable is not fixed, the amount disclosed has been determined by reference to the projected interest rates as illustrated by the yield curves existing at the end of the reporting period. The liquidity analysis for the Group's derivative financial instruments are prepared based on the contractual maturities as the management consider that the contractual maturities are essential for an understanding of the timing of the cash flows of derivatives.

	Weight average interest rate %	Due on demand or within one year US$'000	Due within one to two years US$'000	Due within two to five years US$'000	Due after more than five years US$'000	Total undiscounted cash flows US$'000	Carrying amount at 31 December 2019 US$'000
As at 31 December 2019							
Non-derivative financial liabilities							
Trade and other payables	**–**	**33,458**	**–**	**–**	**–**	**33,458**	**33,458**
Borrowings	**9.5**	**20,703**	**20,645**	**61,935**	**121,291**	**224,574**	**221,907**
Construction costs payable	**8.2**	**22,694**	**–**	**–**	**–**	**22,694**	**22,694**
Lease liabilities	**10.8**	**4,323**	**4,224**	**4,213**	**–**	**12,760**	**10,927**
		81,178	**24,869**	**66,148**	**121,291**	**293,486**	**288,986**
Derivatives – net settlement							
Commodity swap contracts	**–**	**4,285**	**–**	**–**	**–**	**4,285**	**4,285**
As at 31 December 2018							
Non-derivative financial liabilities							
Trade and other payables	–	28,557	–	–	–	28,557	28,557
Borrowings	6.8	111,954	49,713	62,062	–	223,729	212,869
Construction costs payable	8.2	13,596	9,099	–	–	22,695	22,092
		154,107	58,812	62,062	–	274,981	263,518

Fair value

The fair value of other financial assets and financial liabilities at amortised cost is determined in accordance with generally accepted pricing models based on discounted cash flow analysis. The fair value of trade receivables are measured using quoted market index. The fair value of derivative instruments are measured using quoted swap price and discounted using applicable yield rates for the duration of the instruments.

37. RELATED PARTY DISCLOSURES

Transactions between the Group and its related parties are disclosed below. All of the transactions were reviewed by independent members of the board of directors of the Company.

During the year, the Group entered into the following transactions with related parties:

Related parties

Petropavlovsk PLC, which is a substantial shareholder of the Company, and its subsidiaries are considered to be related parties.

As disclosed in note 27, Petropavlovsk PLC provides a guarantee to secure the Group's borrowing, the Group has entered into an agreement setting out the terms on which Petropavlovsk PLC provides the guarantee.

As disclosed in note 18, the Group has entered into the sale and purchase agreement on a helicopter with a related party of the Company at a consideration of approximately US$5,045,000. The transaction is completed in February 2020.

Trading transactions

The Group entered into the following transactions relating to the day-to-day operations of the business:

	Services provided[a]		Services received[b]	
	2019	2018	**2019**	2018
	US$'000	US$'000	**US$'000**	US$'000
Petropavlovsk PLC and its subsidiaries				
Petropavlovsk PLC	**–**	–	**7,856**	3,959
LLC NPGF Regis	**–**	1	**–**	80
CJSC Pokrovskiy Rudnik	**–**	32	**1,804**[c]	2,447[c]
Malomirsky Rudnik	**–**	199	**–**	–
MC Petropavlovsk	**308**	335	**38**	70
LLC Gidrometallurgia	**123**	110	**–**	–
LLC BMRZ	**–**	–	**4**	11

Notes:

(a) Amounts represents due received from related parties for provision of administrative support.

(b) Amounts represent fee paid/payable to related parties for receipt of financial guarantee, administrative support and helicopter services.

A fee equal to 1.75% of the outstanding loan amount under the ICBC Facility Agreement and a fee equal to 3.07% of the outstanding loan amount under the Gazprombank Facility Agreement is paid to Petropavlovsk PLC.

During the year ended 31 December 2019, a fee of US$6,300,000 has been charged to the Group for the provision of the guarantee by Petropavlovsk plc (2018: US$3,940,000). As at 31 December 2019, the outstanding balance of guarantee fee payable to Petropavlovsk PLC is US$10,617,000 (2018: US$10,317,000).

(c) Amount represents interest charged on loan borrowings from a related party (see note 27 for details).

The related party transactions as disclosed above were conducted in accordance with terms mutually agreed with the counter parties.

37. RELATED PARTY DISCLOSURES (CONTINUED)

Trading transactions (continued)

The outstanding balances with related parties at the end of the reporting period are set out below.

	Amounts owed by related parties[a]		Amounts owed to related parties[b]	
	2019	2018	**2019**	2018
	US$'000	US$'000	**US$'000**	US$'000
Petropavlovsk PLC and its subsidiaries				
Petropavlovsk PLC	**–**	–	**12,192**	10,336
OJSC Irgiredmet	**–**	–	**2**	2
LLC NPGF Regis	**18**	16	**88**	104
CJSC Pokrovskiy Rudnik	**183**	163	**1,615**	54,076[c]
CJSC Albynsky Rudnik	**151**	135	**–**	–
Malomirsky Rudnik	**11**	151	**–**	–
MC Petropavlovsk	**951**	509	**1,985**	1,952
LLC Gidrometallurgia	**4**	–	**–**	–
Perter Hambro Mining Engeneering CJSC	**23**	–	**–**	–
	1,341	974	**15,882**	66,470

Notes:

(a) The amounts are recorded in other receivables, which are unsecured, non-interest bearing and repayable on agreed terms within twelve months from the end of the reporting period

(b) The amounts, except for loan borrowings from CJSC Pokrovskiy Rudnik, are recorded in other payables, which are unsecured, non-interest bearing and repayable on agreed terms within twelve months from the end of the reporting period.

(c) The amount mainly represented loan borrowings from CJSC Pokrovskiy Rudnik with details set out in note 27 and interest payable as at 31 December 2018.

Key Management Compensation

The remuneration of directors, which represents members of key management, during the year was as follows:

	2019	2018
	US$'000	US$'000
Short-term benefits	**2,297**	2,195
Post-employment benefits	**99**	114
Share-based payments	**186**	825
	2,582	3,134

The remuneration of key management personnel is determined by the remuneration committee with regards to the performance of the individuals and market trends.

Board of Directors & Company Secretary

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38. PARTICULARS OF PRINCIPAL SUBSIDIARIES

Details of the Group's principal subsidiaries at the end of the reporting period are set out below:

Name of company	Place and date of incorporation/ establishment	Issued and fully paid share capital/ registered capital[d]	Equity interest attributable to the Group 2019[c]	2018[c]	Principal activities
Arfin Limited	Cyprus 22 August 2005	US$18,708	100%	100%	Provision of financing services for the Group
Brasenose Services Limited	Cyprus 20 January 2004	US$64,194	100%	100%	Investment holding
Dardanius Limited	Cyprus 16 October 2006	US$5,691	100%	100%	Investment holding
Esimanor Limited	Cyprus 15 March 2008	US$4,678	100%	100%	Investment holding
Expokom Limited	Cyprus 22 December 2005	US$311,984	100%	100%	Investment holding
Guiner Enterprises Ltd	Cyprus 25 August 2007	US$370,151	100%	100%	Investment holding
Kapucius Services Limited	Cyprus 12 April 2006	US$668,605	100%	100%	Investment holding
Lapwing Limited	Cyprus 9 August 2006	EUR28,795	99.58%	99.58%	Investment holding
Lucilius Investments Limited	Cyprus 22 November 2008	US$27,487	100%	100%	Investment holding
Metellus Limited	Cyprus 21 August 2006	US$8,112	100%	100%	Investment holding
Rumier Holdings Ltd	Cyprus 3 October 2007	US$431,241	100%	100%	Investment holding
Russian Titan Company Limited	Cyprus 10 November 2003	US$271,040	100%	100%	Investment holding
Tenaviva Limited	Cyprus 31 December 2007	US$5,952	100%	100%	Investment holding
Thorholdco (Cyprus) Limited	Cyprus 3 October 2013	US$1,130	100%	100%	Investment holding
Caedmon Ltd	Cyprus 29 September 2011	US$1,547	50.1%	50.1%	Financing and investment holding
Aricom Limited	United Kingdom 12 September 2003	GBP1,334,743	100%	100%	Investment holding

38. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name of company	Place and date of incorporation/ establishment	Issued and fully paid share capital/ registered capital[d]	Equity interest attributable to the Group 2019[c]	2018[c]	Principal activities
Aricom UK Limited	United Kingdom 1 March 2007	GBP243,317,001	100%	100%	Investment holding
Heilongjiang Jiatai Titanium Co. Limited[d]	PRC 11 February 2009	RMB219,024,974	100%	100%	Development of Titanium Sponge
Ariti HK Limited	Hong Kong 11 February 2008	HK$1,575,383	100%	100%	General trading
Ariva HK Limited	Hong Kong 11 March 2008	HK$53,143,001	100%	100%	Investment holding
Thorholdco Limited	Cayman Islands 18 May 2010	US$8,546	100%	100%	Investment holding
Thorrouble Limited	Cayman Islands 18 May 2010	RUR290,860	100%	100%	Provision of financing services for the Group
Thordollar Limited	Cayman Islands 18 May 2010	US$9,157	100%	100%	Provision of financing services for the Group
LLC Petropavlovsk – Iron Ore	Russia 25 August 2004	RUR10,000,000	100%	100%	Business services for the Group
LLC KS GOK	Russia 2 August 2004	RUR141,514,865	100%	100%	Exploration and mining – K&S
LLC Olekminsky Rudnik	Russia 28 March 2001	RUR1,378,664,935	100%	100%	Exploration and mining
CJSC Soviet Harbour Maritime Trade Port ("CJSC SGMTP")[a]	Russia 30 August 2005	RUR1,000,000	100%	100%	Development of port for the Group
OJSC Giproruda[b]	Russia 8 December 1992	RUR4,639	70.28%	70.28%	Engineering services
LLC GMMC	Russia 26 June 2006	RUR780,000,000	100%	100%	Exploration and mining – Garinskoye
LLC Kostenginskiy GOK	Russia 16 February 2007	RUR10,000	100%	100%	Exploration and mining – Kostenginskoye project

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38. PARTICULARS OF PRINCIPAL SUBSIDIARIES (CONTINUED)

Name of company	Place and date of incorporation/ establishment	Issued and fully paid share capital/ registered capital[d]	Equity interest attributable to the Group 2019[c]	2018[c]	Principal activities
LLC Orlovsko – Sokhatinsky Rudnik	Russia 3 April 2007	RUR10,000	100%	100%	Exploration and mining
LLC Garinskaya Infrastructure	Russia 14 December 2007	RUR1,000,000	100%	100%	Transportation services for Garinskoye project
LLC Amursnab	Russia 28 December 2009	RUR10,000,000	99.9%	99.9%	Procurement services
LLC Uralmining	Russia 12 October 2008	RUR1,000,000	100%	100%	Exploration and mining – Bolshoi Seym
LLC Gorniy Park	Russia 25 October 2010	RUR8,400,000	50.1%	50.1%	Exploration and mining

(a) CJSC SGMTP is a closed joint stock company in Russia. Shares issued by CJSC SGMTP cannot be freely traded.

(b) OJSC Giproruda is an open joint stock company in Russia. Shares issued by OJSC Giproruda can be freely traded.

(c) As at 31 December 2019 and 2018, except for Thorholdco Limited, which was directly held by the Company, all of the interests in remaining subsidiaries are indirectly attributable to the Group.

(d) Apart from Heilongjiang Jiatai Titanium Co. Limited, a wholly foreign-owned enterprise established in the PRC with registered capital of RMB219,024,974, class of shares held by all other subsidiaries is ordinary shares.

None of the subsidiaries had issued any debt securities at the end of the year.

The above table lists the subsidiaries of the Group which, in the opinion of the directors, principally affected the results or assets of the Group. To give details of other subsidiaries would, in the opinion of the directors, result in particulars of excessive length.

At the end of the reporting period, the Company did not have subsidiaries that have material non-controlling interests.

39. STATEMENT OF FINANCIAL POSITION AND RESERVES OF THE COMPANY

	2019 US$'000	2018 US$'000
NON-CURRENT ASSET		
Investment in subsidiaries	347,908	348,043
Right-of-use assets	83	–
	347,991	348,043
CURRENT ASSETS		
Prepayment and other receivables	306	377
Amounts due from subsidiaries	3,596	32,753
Cash and cash equivalents	107	741
	4,009	33,871
TOTAL ASSETS	352,000	381,914
CURRENT LIABILITIES		
Amounts due to subsidiaries	(22,930)	(22,595)
Amount due to a shareholder	(12,192)	(37,383)
Accruals and other payables	(1,592)	(1,978)
Lease liabilities	(84)	–
	(36,798)	(61,956)
NET CURRENT LIABILITIES	(32,789)	(28,085)
NON-CURRENT LIABILITY		
Loan from a subsidiary	(8,799)	–
TOTAL liabilities	(45,597)	(61,956)
NET ASSETS	306,403	319,958
CAPITAL AND RESERVES		
Share capital	1,285,158	1,285,158
Capital reserve	592	592
Share-based payment reserve	5,697	5,047
Other reserve	13,759	13,759
Accumulated losses	(998,803)	(984,598)
TOTAL EQUITY	306,403	319,958

The Company's statement of financial position was approved and authorised for issue by the board of directors on 27 March 2020.

Yury Makarov	**Danila Kotlyarov**
DIRECTOR	*DIRECTOR*

39. STATEMENT OF FINANCIAL POSITION AND RESERVES OF THE COMPANY (CONTINUED)

Movement in the Company's reserves

	Capital reserve US$000	Share-based payment reserve US$000	Other reserve US$000	Accumulated losses US$000	Total US$000
At 1 January 2018	592	3,081	13,759	(1,054,046)	(1,036,614)
Profit for the year	–	–	–	69,448	69,448
Total comprehensive income for the year	–	–	–	69,448	69,448
Share-based expense	–	1,966	–	–	1,966
At 31 December 2018	592	5,047	13,759	(984,598)	(965,200)
Loss for the year	–	–	–	(14,205)	(14,205)
Total comprehensive income for the year	–	–	–	(14,205)	(14,205)
Share-based expense	–	650	–	–	650
At 31 December 2019	592	5,697	13,759	(998,803)	(978,755)

40. SUBSEQUENT EVENTS

The outbreak of the 2019 Novel Coronavirus ("COVID-19") and the subsequent quarantine measures imposed by the PRC government has not had a significant impact on the Group's sales to customers based in the PRC.

The directors of the Company are monitoring the financial impact that the COVID-19 would have on the Group's consolidated financial statements as at the date that these financial statements are authorised for issue.

FINANCIAL SUMMARY

	Results of the Group for the year ended 31 December				
	2015	2016	2017	2018	**2019**
	US$'000	US$'000	US$'000	US$'000	**US$'000**
Revenue	81,910	16,467	109,265	151,549	**177,164**
(Loss) profit attributable to owners of the Company	(508,969)	(18,226)	113,254	68,235	**(38,669)**

	Assets and liabilities of the Group as at 31 December				
	2015	2016	2017	2018	**2019**
	US$'000	US$'000	US$'000	US$'000	**US$'000**
Total assets	420,635	432,845	546,282	609,960	**607,430**
Less: Total liabilities	(299,459)	(299,231)	(294,838)	(290,450)	**(329,429)**
Total net assets	121,176	133,614	251,444	319,510	**278,001**

GLOSSARY

This glossary contains definitions of certain terms used in this report in connection with the Group and its business. Some of these may not correspond to standard industry definitions.

ASP	Achieved selling price
Board	The Board of Directors
Cayiron	Cayiron Limited, a wholly owned subsidiary of Petropavlovsk and the immediate controlling shareholder of the Company
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CFR	INCOTERM Cost and Freight
CIM	The Canadian Institute of Mining, Metallurgy and Petroleum
CNEEC	China National Electric Engineering Company Limited, the principle EPC contractor at the K&S Project
Concentrate	The clean product recovered from a treatment plant
DAP	INCOTERM Delivery at Place
Deposit	Mineral deposit or ore deposit is used to designate a natural occurrence of a useful mineral, or an ore, in sufficient extent and degree of concentration
Directors	The directors of the Company
DSO	Direct shipping ores. Ores that are economic due to their high grades and therefore limited requirement for upgrading and processing before sale to end users. Raw material for iron ore concentrate, isometric mineral, Fe
EAO	Jewish Autonomous Region, an oblast of the Russian Federation
EBITDA	Earnings before interest, tax, depreciation and amortisation
EPC	Engineering, Procurement and Construction contract
Exploration	Method by which ore deposits are evaluated
Fe	The chemical symbol for iron
Feasibility study	An extensive technical and financial study to assess the commercial viability of a project
Flotation	A mineral process used to separate mineral particles in a slurry, by causing them to selectively adhere to a froth and float to the surface
FOB	INCOTERM Free on Board
Gazprombank	Gazprombank, is a private-owned Russian bank, the third largest bank in Russia by assets
GDP	Gross domestic product
General Nice	General Nice Development Limited is a Hong Kong incorporated holding company which trades and produces steel raw material commodities in China and globally
Geophysical	Prospecting techniques which measure the physical properties (magnetism, conductivity, density, etc.) of rocks and define anomalies for further testing
Geotechnical	Referring to the use of scientific methods and engineering principles to acquire, interpret, and apply knowledge of earth materials for solving engineering problems
Grade	Relative quantity or the percentage of ore mineral or metal content in an ore body
HK$	Hong Kong dollars, the lawful currency of Hong Kong
HKEx	Hong Kong Exchanges and Clearing Limited
Hong Kong	The Hong Kong Special Administrative Region of the PRC
HSE	Health, Safety and Environment
ICBC	Industrial and Commercial Bank of China Limited, a company listed on the Stock Exchange (Stock code: 1398)
Ilmenite	Iron titanium oxide; a trigonal mineral, chemical formula $FeTiO_3$
JORC code	The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2004 edition), as published by the Joint Ore Reserves Committee, as amended from time to time
K&S	A magnetite development project in the Company's portfolio consisting of the Kimkan deposit and the Sutara deposit
LTIFR	Lost time injury frequency rate, the number of lost time injuries per million man hours worked
Magnetite	Fe_3O_4; major mineral in banded iron formations, generally low grade (1.5-40% iron)
Metallurgical	Describing the science concerned with the production, purification and properties of metals and their applications
Micon	Micon International Limited has provided consulting services to the international mining industry since 1988, with particular focus upon mineral resource estimations, metallurgical services, mine design and production scheduling, preparation of pre-feasibility and feasibility studies, independent reviews of mining and mineral properties, project monitoring, independent engineer roles, financial analysis and litigation support. Micon's resource estimate complies with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) standards and definitions, as required by Canadian National Instrument 43-101 (NI 43-101)
Mill	Equipment used to grind crushed rocks to the desired size for mineral extraction
Mineralisation	Process of formation and concentration of elements and their chemical compounds within a mass or body of rock

NI 43-101	Also referred to as National Instrument 43-101, the (Canadian) Standards of Disclosure for Mineral Projects, including Companion Policy 43-101 as amended from time to time
Open-pit	A large scale hard rock surface mine; mine working or excavation open to the surface
Optimisation	Co-ordination of various mining and processing factors, controls and specifications to provide optimum conditions for technical/economic operation
Ore	Material from which a mineral or minerals of economic value can be extracted profitably or to satisfy social or political objectives
Ore-field	A zone of concentration of mineral occurrences
Ore body	Mining term to define a solid mass of mineralised rock which can be mined profitably under current or immediately foreseeable economic conditions
Ore Reserves	The parts of a Mineral Resource that can at present be economically mined
Petropavlovsk	Petropavlovsk plc, the London Stock Exchange quoted, Russian gold mining company
Precious metal	Gold, silver and platinum group minerals
Primary	Characteristic of or existing in a rock at the time of its formation; pertains to minerals, textures etc.; original
Processing	Methods employed to clean, process and prepare materials or ore into the final marketable product
Recovery	Proportion of valuable material obtained in the processing of an ore, stated as a percentage of the material recovered compared with the total material present
Resources	The concentration of material of economic interest in or on the earth's crust
ROM	Run-of-mine. This is recovered ore, as mined with dilution, before any pre-concentration or other form of processing
Russian Far East	Refers to the Far Eastern Federal district of the Russian Federation, which covers the area of Russia between Lake Baikal in Siberia and the Pacific Ocean
Shareholder(s)	Holder of the Share(s)
SRP	Steel/Slag Reprocessing Project
Stock Exchange	The Stock Exchange of Hong Kong Limited
Tailings	Material that remains after all metals/minerals considered economic have been removed from the ore
TiO_2	Titanium dioxide. A fine white powder. Used in paints, plastics or paper, it provides for maximum whiteness and opacity
Titanomagnetite	Concentrate which is a variation of a magnetite concentrate typically with a high vanadium and titanium content
Treatment plant	A plant where ore undergoes physical or chemical treatment to extract the valuable metals/ minerals
Tonne/t	1 wet metric tonne (1,000 kg)
US Dollar or US$	United States Dollar

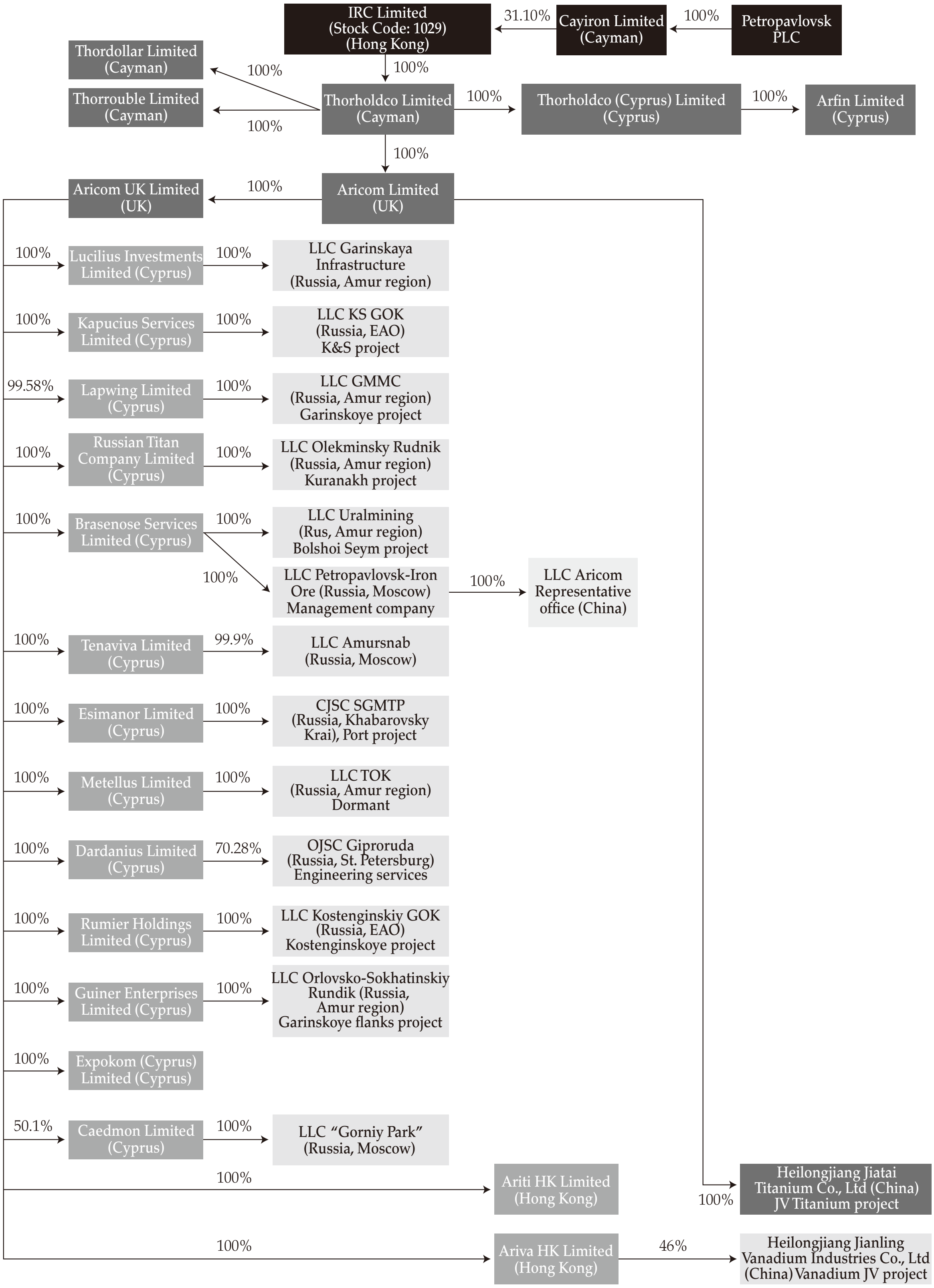
LIST OF ABBREVIATIONS

°C	degrees Celsius, a thermal unit equivalent to Kelvin+273.15
CaO	chemical symbol for calcium oxide or quicklime
Fe	chemical symbol for iron
Fe_{magn}	total iron in the ore originating from magnetite
$Fe_{(total)}$	total amount of iron content
ha	hectares
kg	kilogramme, the SI unit of mass
km	kilometres, a unit of length equivalent to 1,000 m
km^2	square kilometres, a unit of area equivalent to 1,000,000 m^2
Kt	thousand tonnes
Ktpa	thousand tonnes per annum
kV	kilovolts, one thousand volts, a unit of electromotive force
Kwh	kilowatt hour, a unit of energy
m	metres, the SI unit of length
m^3	cubic meter, a unit of volume
mm	millimetres, unit of length equivalent to 0.001 m
Mt	million tonnes
Mtpa	million tonnes per annum
mWt	megawatt, one million watts, a unit of power
nm	not measured
sq.m.	square metre, a unit of area
t	a wet metric tonne, a unit of mass equivalent to 1,000 kg
tpa	tonnes per annum
TiO_2	chemical symbol for titanium dioxide
V_2O_5	chemical symbol for vanadium pentoxide

All dollars refer to United States Dollars unless otherwise stated.

All maps and diagrams in this report are for illustration purposes only and are not to scale.

CORPORATE STRUCTURE



CORPORATE INFORMATION

IRC LIMITED — 鐵江現貨有限公司

Stock Exchange of Hong Kong: 1029

As at 31 December 2019

CORPORATE INFORMATION

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Facsimile: +852 2772 0329
Corporate Website: www.ircgroup.com.hk

Hong Kong Business Registration number: 52399423
Hong Kong Company Registration number: 1464973

PRINCIPAL PLACE OF BUSINESS IN RUSSIA

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7/F, Business Center "Golden Gate"
Moscow
109544
Russia

CHAIRMAN

P.C.P. Hambro

DEPUTY CHAIRMAN

D.R. Bradshaw

EXECUTIVE DIRECTORS

Chief Executive Officer: Y.V. Makarov
Chief Financial Officer: D. Kotlyarov

NON-EXECUTIVE DIRECTORS

P.C.P. Hambro
C.K. Cheng

INDEPENDENT NON-EXECUTIVE DIRECTORS

D.R. Bradshaw, *Senior Independent Non-Executive Director*
C.F. Li
J.E. Martin Smith
S. Murray, *CBE, Chevalier de la Légion d'Honneur*
R.K.T. Woo

EMERITUS DIRECTOR

Dr P.A. Maslovskiy

COMMITTEES OF THE BOARD

Audit Committee

C.F. Li *(Chairman)*
J.E. Martin Smith
D.R. Bradshaw

Remuneration Committee

J.E. Martin Smith *(Chairman)*
D.R. Bradshaw
C.F. Li

Health, Safety and Environment Committee

D.R. Bradshaw *(Chairman)*
C.F. Li
J.E. Martin Smith

Nomination Committee

P.C.P. Hambro *(Chairman)*
D.R. Bradshaw
J.E. Martin Smith

AUTHORISED REPRESENTATIVES FOR THE PURPOSES OF THE STOCK EXCHANGE OF HONG KONG LIMITED

D. Kotlyarov
J.S.C. Yuen

COMPANY SECRETARY

J.S.C. Yuen

AUDITOR

Deloitte Touche Tohmatsu, *Certified Public Accountants*
Registered public interest entity auditors

RISK FACTORS & DISCLAIMER

RISK FACTORS

The Group is exposed to a variety of risks and uncertainties that could have significant impact on its business and financial results. The Group seeks to undertake a pro-active approach that anticipates risk, seeks to identify them, measure their impacts and thereby avoid, reduce, transfer or control such risks.

The factors set out below are those that the Group believes could result in a material difference between the Group's financial condition or the results of its operations and the expected or historical results. There may be other risks in addition to those shown below which are not known to the Group or which may not be material now but could turn out to be material in the future.

Risk of iron ore price volatility and foreign exchange movements

The Group's revenues rely on the iron ore prices, while the operating costs are sensitive to the foreign exchange movements of Russian Rouble. These parameters are subject to changes in global economic environment, political landscape and market supply disruptions. The volatility in iron ore price and foreign exchange may also result in the need to provide for assets impairments in the Group's financial statements.

To address the risks, various hedge instruments have been adopted to protect against the downside risks of the iron ore price movements. The Group could use different hedge strategies from time to time depending on the market situation of iron ore price. The Group also monitors the movements in the exchange rate of Russian Rouble and could perform currency hedging if considered necessary.

Risk of customers concentration

Currently, the Group's iron ore business only has a limited number of major customers. This essentially creates a buyers' market and gives the customers a higher level of bargaining power.

In light of this risk, the Group is exploring the possibility of selling to other Chinese customers, although the transportation costs could be higher. The Group is also levering on the fact the major customers are in different geographical locations and jurisdictions, so that there is a certain level of competition for better terms of sales and prices. External consultant has been engaged to provide advices and explore new market opportunities. In addition, after the commissioning of the Amur River Bridge, IRC will actively explore new transportation routes which may be more cost efficient to allow the Group to tap into new customer base.

Risk of suppliers concentration

The Group currently have two mining contractors who are doing a majority of the mining works on K&S. In case these mining contractors have any technical/financial difficulties and decide to pull out of the project, K&S could face an adverse situation with ore mining and supply, and consequently could affect production. Besides, this gives these mining contractors higher level of bargaining power on mining fees which might adversely affect K&S's profitability.

To mitigate this risk, the Group has ongoing discussions with a number of other mining contractors for risk diversification. Moreover, one of the current mining contractors has a long – established relationship with IRC and this provides a certain level of comfort.

Risk of delay in the capital investment program to develop the Sutara pit due to technical or financial difficulties

If the Sutara deposit is not ready for operation when the Kimkan deposit starts depleting, K&S would not have adequate supply of ore for production and would result in decrease in production capacity.

To mitigate this risk, the Sutara development program is closely monitored by IRC, With the help of external consultants, IRC is looking at the options to increase the mineable reserves in Kimkan to extend its mine life. The Group is also discussing with potential partners/investors to assess if any form of fund raising/co-investment is feasible, if needed. Recent consultant report shows that the Sutara development program is viable and achievable.

Risk of going concern

The Group may not have adequate funding to meet its debts as they fall due.

The completion of the ICBC refinancing with the loans from Gazprombank has significantly reduced the going concern risks. Cash flow forecasts are prepared on a monthly basis, and any potential funding gaps are identified and addressed timely.

Risk of fixed assets damage resulting in downtime in production or fluctuation in production volume

Fixed assets play an important role in the Group's iron ore production. With only a single project in operation, any production downtime or delay in production ramp up would have direct impact to the Group.

When considering this risk, it should be noted that most of the commissioning works were performed by the K&S site team and the team is experienced and is technically competent. External experts perform regular technical audits of the processing plant. Production is currently at relatively high capacities indicating that most of the teething issues have been resolved.

Risk of products' competitiveness

The Group's revenue stream is mainly derived from the sales of a single product (iron ore) from a single project (K&S) and there could be a risk of high product concentration.

K&S is focusing on the premium iron ore market (65% iron ore concentrate) which is essentially a different market segment to the 62% one and is more preferred by the market. As the quantity produced by K&S only represents a small percentage of the total market share, the risk of not being able to sell the product is relatively low. The potential of re-opening Kuranakh for the sale of 62% iron ore concentrate and ilmenite, more revenue from the operation of the Vanadium joint venture and the potential of developing the Bolshoi Seym project for ilmenite may also lower the risk.

Risk of conducting business in Russia

As the majority of the Group's assets and business operations are located in Russia, sanctions from United States and the European Union as well as the local economic political and social conditions, including taxation policies, could affect the business of the Group.

To address the risk, the Group closely monitors the economic, political, legal and social developments in Russia and maintains close relationship with local authorities and seeks assistance where necessary. IRC has a strict policy to avoid doing businesses with sanctioned companies, individuals and regions. Despite sanctions from United States and the European Union which are not affecting the Group directly, overall political and legislative environments in Russia have been relatively stable over the past years.

Risk of significant influence from the controlling shareholder

As Petropavlovsk is the single largest shareholder of IRC, and the rest of IRC's shareholding is not concentrated, Petropavlovsk's influence in IRC could be significant and may negatively affect IRC. There could be a lack of other sizeable shareholders to contest against any decisions taken by Petropavlovsk.

To manage this risk, IRC maintains a close working relationship with Petropavlovsk's board and management with a view to act in the best interest of both Petropavlovsk and IRC. With Petropavlovsk being a connected party to IRC, transactions involving Petropavlovsk would be subject to shareholders' approval under the listing rules of Hong Kong. Petropavlovsk would need to abstain from voting due to conflict of interests.

Risk of novel coronavirus

A novel strain of coronavirus was detected and has emerged since early 2020. The Group has been closely monitoring the impact of the contagious coronavirus disease ("COVID-19"). Currently, the COVID-19 outbreak have not had any significant impact on the Group's operations. The Group will monitor the situation and apply contingency measures as the COVID-19 outbreak evolves.

Risk of lack of shareholders' support

IRC currently only has one major shareholder, Petropavlovsk, holding 31.1% shareholding. None of the rest of the shareholders holds more than 5% of IRC. As Petropavlovsk does not fully control IRC, given that it does not possess more than 50% shareholding, there is a risk that IRC may not get the necessary shareholders' support when needed.

Petropavlovsk and IRC have always been in discussions with various parties for investing in IRC and/or expanding the shareholders base provided that it will be in the best interest of IRC. Shareholders tracking is performed periodically to identify and to reach out to the shareholders. Investors' conference calls are conducted at least six times a year to facilitate better investor relation function.

Risk of loss of key management

There is a risk that IRC may find it difficult to attract and/or retain key personnel.

Directors of IRC have a reasonable notice period of resignation and share options which are vested over a period of time are granted to key personnel. Discretionary bonuses are offered to reward exceptional performance and salary levels are being reviewed regularly to ensure that they are competitive and on market levels.

Risk of non-compliance with rules and regulations

IRC is a listed company in Hong Kong and needs to comply with the relevant rules and regulations such as the listing rules, accounting standards and company ordinances. The operations in Russia also need to comply with the relevant requirements under the local jurisdictions.

To control this risk, the Board and the senior management of IRC possess the relevant experience and knowledge for the compliance with the relevant rules and regulations. Besides, advices from independent legal counsels and professional advisors are sought where necessary. Formal training is provided to the board annually. Continuing professional development seminars and rules and regulations updates are attended by senior management.

DISCLAIMER

Some statements contained in this document referred to in it are or may be forward-looking statements. Statements reflect the Company's current views with respect to future events and are subject to risks, assumptions, uncertainties and other factors beyond the Company's control that could cause actual results to differ from those expressed in such statements. Although the Company believes that such forward-looking statements, which speak only as of the date of this document, are reasonable, no assurance can be given that they will prove to be correct. Therefore, you should not place undue reliance on these statements. There can be no assurance that the results and events contemplated by the forward-looking statements contained in this document will, in fact, occur. The Company will not undertake any obligation to release publicly any revisions to these forward looking statements to reflect events, circumstances or unanticipated events occurring after the date of this document, except as required by law or by any appropriate regulatory authority. Nothing in this document or in documents referred to herein should be considered as a profit forecast. Past performance of the Company or its shares cannot be relied on as a guide to future performance. This document does not constitute, or form part of or contain any invitation or offer to any person to underwrite, subscribe for, otherwise acquire, or dispose of any shares in IRC Limited or advise persons to do so in any jurisdiction, nor shall it, or any part of it, form the basis of or be relied on in any connection with or act as an inducement to enter into any contract or commitment therefore. In particular, this document and the information contained herein are not an offer of securities for sale in the United States of America. No reliance may be placed for any purpose whatsoever on the information or opinions contained in this document or on its completeness and no liability whatsoever is accepted for any loss howsoever arising from any use of this document or its contents or otherwise in connection therewith. The development and production plans and estimates set out herein represent the current views of the Company's management. The Company's Board reviews the production estimates on an ongoing basis. All planning is subject to available funding and capital allocation decisions. This document is prepared in compliance with Hong Kong law and the courts of the Hong Kong Special Administrative Region of the People's Republic of China will have exclusive jurisdiction over any disputes arising from or connected with this document.

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MILESTONES

Our Future	K&S	Full capacity to 3.2mt per year Doubling production (Phase II)
	Kuranakh	Restart the mine
	Garinskoye	Trial production
	Bolshoi Seym	Iron ore and ilmenite production
2019	IRC	ICBC refinancing completed
	K&S	Operated at 100% of designed capacity in October
	SRP	Vanadium joint venture recommence operation
2018	K&S	Entry into refinancing facility with Gazprombank Operated at 105% of designed capacity during a 24-hour run Produced over 2.2 million tonnes in 2018
2017	K&S	Commercial production (Phase I) 90%-capacity loading test Produced over 1.5 million tonnes in 2017
2016	IRC	Tiger Capital shares subscription
	K&S	Trial production commenced and ramp-up First iron ore concentrate production Final hot commissioning and testing
2015	IRC	Completed fully underwritten Open Offer
	K&S	Ongoing commissioning and testing
2014	K&S	Commissioning programme commenced
2013	IRC	General Nice strategic alliance
	K&S	Ongoing construction
2012	Kuranakh	Ilmenite production full capacity
	Garinskoye	DSO operation announced
	Exploration	Ilmenite & Molybdenum Exploration acquisitions
2011	IRC	Group reserves increase threefold
	Kuranakh	Full year production targets exceeded
	K&S	First drawdown ICBC facility Optimisation study to double K&S production
2010	IRC	HKEx listing
	Kuranakh	Commissioned Iron ore production full capacity
	K&S	US$340m ICBC facility US$400m CNEEC EPC contract
	SRP	First production

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