# PROVEN ASSETS. FUNDAMENTAL VALUE.





2018 WORKING TOWARD SUSTAINABLE DEVELOPMENT REPORT





## FREEPORT-MCMoRAN

Freeport-McMoRan Inc. (Freeport-McMoRan or the company) is a leading international mining company with headquarters in Phoenix, Arizona. The company operates large, long-lived, geographically diverse assets with significant proven and probable reserves of copper, gold and molybdenum. Freeport-McMoRan's portfolio of assets includes the Grasberg minerals district in Indonesia, one of the world's largest copper and gold deposits; and significant mining operations in North America and South America, including the large-scale Morenci minerals district in Arizona and the Cerro Verde operation in Peru.

#### **ABOUT THIS REPORT**

Freeport-McMoRan has published a Working Toward Sustainable Development (WTSD) report annually since 2001. This 2018 WTSD report is meant to provide stakeholders with summary information on our sustainability programs, including policies, management systems and performance data. Additional information is located on our website at fcx.com/sustainability. Data presented primarily includes the operations of Freeport-McMoRan's subsidiaries: Freeport Minerals Corporation (FMC) and PT Freeport Indonesia (PTFI) for the period January 1, 2018 to December 31, 2018.

## **GLOBAL REPORTING INITIATIVE (GRI)**

This report has been prepared in accordance with the GRI Standards Core option and the G4 Mining and Metals Sector Supplement. We have reported under GRI guidelines annually since 2005. A Sustainability Reporting Prioritization Assessment process that focuses on risks and opportunities, both to the business and to stakeholders, is used to delineate the reported topics and disclosures. Additional information about this process is located on our website.

## **EXTERNAL ASSURANCE**

Since 2005, Freeport-McMoRan has sought independent verification of its annual sustainability reports. External assurance of our 2018 WTSD reporting was conducted by Corporate Integrity Ltd. in accordance with the ICMM Sustainable Development Framework Assurance Procedure. Since 2009, site-level external assurance has been completed multiple times at all active mining and metals processing operations. We conduct site-level external assurance at operations at a minimum of once every three years, with annual assurance engagements at PTFI and Cerro Verde. The 2018 Assurance Statement can be found on page 36.

#### CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

## THE UNITED NATIONS (UN) SUSTAINABLE **DEVELOPMENT GOALS (SDGs)**



The SDGs provide an ambitious framework for sustainable development globally, including in the countries where we operate. They are the UN-agreed priority areas for global sustainable development between 2015 and 2030.

Freeport-McMoRan seeks to make a positive contribution to the SDGs while mitigating any potential impediments to their realization. We are in the process of prioritizing areas where we can help advance the SDGs, at both the corporate and asset levels, while enhancing our existing programs that align with SDG objectives.

A cross-reference to the SDGs and reported information is available in our GRI Content Index and signposted in each core section of our website at fcx.com/sustainability.



This report contains forward-looking statements, which are all statements other than statements of historical fact. The words "anticipates," "may," "can," "plans," "believes," "estimates," "expects," "targets," "intends," "likely," "will," "should," "to be," "potential" and any similar expressions are intended to identify those assertions as forward-looking statements. Freeport-McMoRan cautions readers that forward-looking statements are not guarantees of future performance and actual results may differ materially from those anticipated, expected, projected or assumed in the forward-looking statements. Important factors that can cause our actual results to differ materially from those anticipated in the forward-looking statements include, but are not limited to, factors described under the heading "Risk Factors" in Freeport-McMoRan's Annual Report on Form 10-K for the year ended December 31, 2018, filed with the SEC and available on our website at fcx.com.

## PROVEN ASSETS. FUNDAMENTAL VALUE.

Freeport-McMoRan's premier portfolio of long-lived, geographically diverse copper assets provides value and opportunity. As our global team works to maximize value through cost management, productivity and our commitment to sustainable development, the global marketplace looks to our resources as a key element for economic growth and technological progress.

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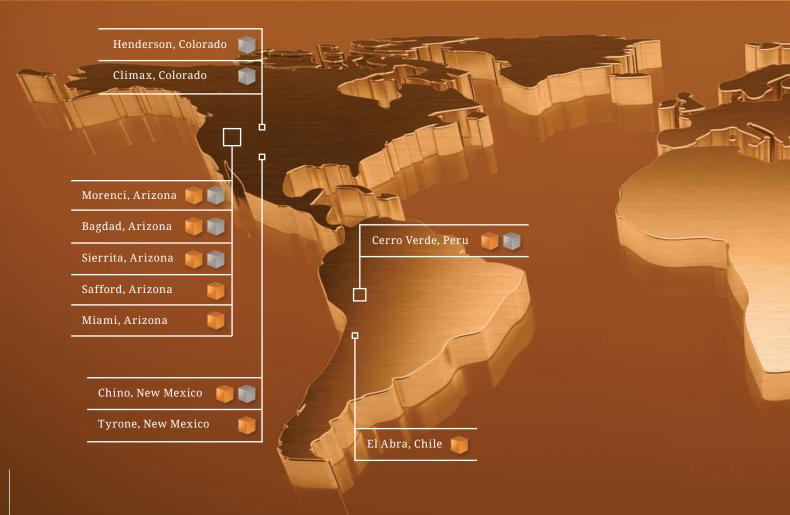
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	NORTH AMERICA	SOUTH AMERICA	INDONESIA	CONSOLIDATED TOTALS
RESERVES AT 12/31/18	Cu 49.9 billion lbs Au 0.6 million ozs Mo 3.06 billion lbs	Cu 33.5 billion lbs Mo 0.72 billion lbs	Cu 36.2 billion lbs Au 30.2 million ozs	Cu 119.6 billion lbs Au 30.8 million ozs Mo 3.78 billion lbs

Note: lbs=pounds; ozs=ounces

Freeport-McMoRan owns and
operates strategic copper mines
around the world that are
"Proven Assets."



## SUMMARY OF KEY ECONOMIC CONTRIBUTIONS BY OPERATING REGION

FOR THE YEAR ENDED DECEMBER 31, 2018 (\$ MILLIONS)	NORTH AMERICA®	SOUTH AMERICA	INDONESIA	EUROPE	OTHER COUNTRIES	TOTAL
Payments to suppliers	3,773	1,636	1,582	3,046	3	10,040
Employee wages and benefits	1,387	417	281	105	5	2,195
Payments to providers of capital:						
Dividends	218	98	180			496
Interest	486	83	-1	25		595
Payments to governments <sup>b</sup>	21	220	919	19	3	1,182
Community investments	45	7	103	- H		155
Direct economic contributions	\$ 5,930	\$ 2,461	\$ 3,066	\$ 3,195	\$11	\$ 14,663
Capital expenditures <sup>c</sup>	\$ 691	\$ 237	\$ 1,001	\$ 42		\$ 1,971

Note: These amounts were derived primarily from Freeport-McMoRan's publicly reported segment data, including amounts for oil and gas operations. For disclosure of Freeport-McMoRan's segment data in accordance with generally accepted accounting principles (GAAP), see Freeport-McMoRan's 2018 Form 10-K pages 166 – 170.

a. Includes parent company results.

b. Excludes employee payroll taxes, dividends, property taxes and certain other taxes, which are included in payments to suppliers and dividends. A reconciliation to the 2018 Cash Payments to Governments schedule on page 18 can be found on Freeport-McMoRan's website.

c. Includes costs for capital projects, which includes additional payments to suppliers, employee wages and benefits, payments to providers of capital and payments to governments, not included in the table above.

Timok, Serbia (Undeveloped)

Kisanfu, Democratic Republic of Congo (Undeveloped) Grasberg, Indonesia 🛛 🍵 👘

Copper (Cu) Gold (Au)

Molybdenum (Mo)

#### **DEAR FELLOW STAKEHOLDERS**

n behalf of our Board of Directors and senior management team, we are pleased to present to you our 2018 Working Toward Sustainable Development Report "Proven Assets. Fundamental Value." Within the report, we review our sustainability programs and performance that strengthen our ability to deliver social purpose. In doing so, our sharp focus is on maintaining broad stakeholder acceptance to operate our long-lived assets as well as providing responsibly produced products to expanding and cleaner economies.

Given the tragic tailings dam event in Brazil in early 2019, we first want to address tailings management. We recognize that the failure of tailings and other impoundments at any of our mining operations

could cause loss of life as well as severe, and in some cases, catastrophic property and environmental damage. As a result, our programs take into account the significant consequences resulting from a potential failure, and we apply substantial financial and technical resources, both internal and external, to the safe management of our

The long-term fundamentals for copper are positive, underpinned by its role in the global economy, the trend toward copper-intensive renewable energy and electrification systems and limitations on new supply projects. We are strongly positioned to benefit from increasing copper prices with our large-scale asset base and importantly, a dedicated workforce that is committed to safe production.

to continue to identify and share technical good practices to mitigate tailings-related safety and environmental risks. As part of this effort and our culture of transparency, we are disclosing additional information about our tailings storage facilities and tailings management practices on our website.

During 2018, while increasing mining rates, our global team achieved safe and strong operating results supported by implementation of our Fatal Risk Management program and superior equipment efficiencies. Deploying real-time systems to enhance predictive maintenance and enable higher equipment availability and utilization is core to our operating plans. We are continuing to work with big data analytics to reduce costs and improve productivity across our organization, with the benefit of associated emissions avoidance. Today,

> approximately 87 percent of the electricity we purchase is generated from renewable and lowcarbon sources, and we continue to engage experts to review opportunities to source additional renewable energy to support operational power requirements.

Our operations, many of which are located in arid regions, achieved an 86 percent average

active and inactive tailings facilities. We employ a multi-tiered approach to stewardship of our tailings facilities. Our approach starts with sitelevel operational management and engineering teams supported by our corporate technical experts. Engineers of record prescribe any engineering enhancements that may be required during construction and operations. In addition, we have commissioned external technical review boards comprised of internationally recognized tailings experts that provide independent opinions and guidance on the physical integrity, safety and performance of our facilities. We are committed to addressing the factors that caused past failure events at unaffiliated mines and working with our industry peers, outside experts and civil society stakeholders

water-use efficiency rate. We view our strong water management performance as a strategic driver for stakeholder acceptance to operate our mines as a changing climate is increasing risks associated with physical availability of water. In recent years, we have experienced weather events at certain operations, including intense rainfall in Chile's Atacama Desert, that have temporarily affected production. The physical risks associated with climate change are evaluated in our sustainable development risk management process, and we are working to enhance the resiliency of our assets to potential near-term and longer-term impacts.

Our principles of accountability to communities are fundamental to our operations and business strategy. Consistent and trustworthy engagement is important for reducing social risks to the business and also in identifying where our investments can have meaningful, long-term impact. Community engagement and development is part of our company's culture and, since 2007, we have invested over \$2 billion in social programs and projects. Currently, we are prioritizing our community investments on the development of skills for our workforce and community members. We want to empower people and communities with the skills and opportunities to construct meaningful futures.

In accordance with our Human Rights Policy, we continue to implement the UN Guiding Principles on Business and Human Rights to help us identify, prevent, mitigate and address adverse impacts on individuals related to our activities. During 2018, with the assistance of a third-party consultant, we completed a human rights impact assessment at our New Mexico operations. Results of feedback from internal and external stakeholders indicated that the management systems that support our respect for human rights are working well. Nonetheless, the feedback also identified opportunities to improve our programs in areas ranging from deploying targeted training for staff on specific human rights topics to strategic community engagement plans that address misperceptions about our actual environmental impacts.

Stakeholder expectations for our industry continue to heighten and, as a result, our site-level sustainability programs continue to evolve. This includes implementing 38 performance expectations unanimously approved by ICMM's Council of CEOs in December 2018. We will incorporate site-level validation of these expectations into the scope of our annual external assurance program and increase the granularity and transparency of our external reporting.

The rapidly shifting focus on responsible supply chains has led to responsible production being critical to safeguarding market access for the metals we produce. We are engaging in select frameworks, including the Responsible Minerals Initiative, which promote the sourcing of responsibly produced metals throughout the value chain. We intend to pursue the International Copper Association's recently announced "Copper Mark" at our copper mines. For our brands listed on the London Metals Exchange, we are planning to adhere to the exchange's evolving requirements on responsible sourcing. We believe that our site-level programs provide a robust platform to address current and future responsible sourcing requirements.

We believe that the long-term fundamentals for copper are positive, underpinned by its role in the global economy, the trend toward copper-intensive renewable energy and electrification systems and limitations on new supply projects. We are strongly positioned to benefit from increasing copper prices with our large-scale asset base and importantly, a dedicated workforce that is committed to safe production. We believe a workforce comprised of people with varying ideas, perspectives and life experiences makes us stronger, and we are taking steps to further generate inclusion and diversity.

In closing, we want to thank our many stakeholders for their continued collaboration and interest in our company as we advance another year of enhancing our sustainability programs.

Respectfully yours,

**GERALD J. FORD** Non-Executive Chairman of the Board



June 12, 2019

PEAtterson

RICHARD C. ADKERSON Vice Chairman of the Board, President and Chief Executive Officer





this ambition.

## PRODUCING RESPONSIBLY AND POWERING SOCIETY

Many stakeholders share our view that we should serve a social purpose and make positive contributions to society for the long term. Our sustainable development programs facilitate our ability to deliver on

We must maintain acceptance to operate through shared value at the local level in order to reinvest in our existing properties and invest in new ventures, thereby increasing the production of metals needed for a healthy and prosperous world. Our sustainability performance is critical to meeting society's responsible sourcing objectives so that we can place our products, which power societal advancement, into the global marketplace today and into the future. Many stakeholders share our view that we should serve a social purpose and make positive contributions to society for the long term. Our sustainable development programs facilitate our ability to deliver on this ambition.

To supply essential metals to current and future generations, we are guided by our stated business objectives, principles and policies, and we work continuously to improve our systems. Throughout this report, we review the progress we are making on key issues, including those emerging, which affect our company and our stakeholders.



Safford mine, Arizona

## PRINCIPLES OF BUSINESS CONDUCT

Freeport-McMoRan's Principles of Business Conduct (PBC) highlight our core values of SAFETY, RESPECT, INTEGRITY, **EXCELLENCE** and **COMMITMENT**, and they help guide how we do business, from top-level management to entry-level employees. The PBC sets forth a variety of business principles, from promoting a safe workplace to complying with laws and avoiding conflicts of interest to developing positive relationships with local communities. Freeport-McMoRan and its affiliates have established multiple mechanisms for employees and other stakeholders to report concerns regarding potential violations of the PBC. One of the primary mechanisms is the Freeport-McMoRan Compliance Line, a phone system managed by an independent third party that allows for anonymous reporting. In addition, we offer a web-based reporting system, also operated by a third party, along with an option for direct email to our Compliance Department. These accessible channels complement our long-established community and human rights grievance systems that collectively support our implementation of the UN Guiding Principles on Business and Human Rights. By providing multiple reporting mechanisms, including anonymous communications, our workforce is encouraged to Speak Up if something violates, or could possibly violate, our PBC.

During 2018, we revised the Freeport-McMoRan Supplier Code of Conduct, which sets forth our expectations for our supply chain partners in areas such as safety, respect for human rights, anti-corruption, community and environment. These policies, along with external standards and initiatives, form the overall framework that guides our sustainability programs. Supporting this framework are internal governance and management systems that detail how we operate.

#### **GOVERNANCE**

The Freeport-McMoRan Board of Directors (Board) as a whole is responsible for risk oversight, with reviews being conducted by the relevant Board committees that regularly report to the full Board. In its risk oversight role, the Board reviews, evaluates and discusses with members of management whether the risk management processes designed and implemented are adequate in identifying, assessing, managing and mitigating material risks facing the company.

Our Non-Executive Chairman regularly meets with our Chief Executive Officer and discusses a variety of matters including business strategies, opportunities, key challenges and risks facing the company as well as management's risk mitigation strategies. Senior management attends regularly scheduled Board meetings where they present on various strategic matters involving our operations and are available to address



The Grasberg Block Cave will anchor the world's largest underground copper mining complex. Above, an automated rail system is being installed on four levels of the mine to safely transport ore and materials.

any questions or concerns raised by the Board. The Board oversees the strategic direction of the company and, in doing so, considers the potential rewards and risks of our business opportunities and challenges and monitors the development and management of risks that impact our strategic goals.

The Board has four standing committees: Audit, Compensation, Nominating and Corporate Governance, and, Corporate Responsibility, each of which is composed entirely of independent directors. The Corporate Responsibility Committee assists the Board in fulfilling its oversight responsibilities with respect to the management of risks associated with our safety and health policies and programs, environmental policy and programs, human rights policy and practices, community and public health programs, community policy and practices, governmental and stakeholder relations, sustainable development programs, programs to evaluate and address climate-related impacts and opportunities, charitable contributions, and political activity and spending practices.

During 2018, the Corporate Responsibility Committee received various reports and considered items with a particular focus on safety, which included reviewing the root causes of safety incidents and corrective actions implemented to prevent future accidents. In addition, the Corporate Responsibility Committee reviewed our human rights program, including the results of the human rights impact assessments at Cerro Verde and the New Mexico operations, responsible sourcing frameworks, social investment and charitable contributions, progress addressing reclamation and remediation liabilities, community medical and public health services, political activity and spending practices, and financial sector stakeholder engagement on sustainability matters. The Corporate Responsibility Committee reports to our Board, which provides oversight on all matters.



## SUSTAINABLE DEVELOPMENT LEADERSHIP TEAM

Our company's Sustainable Development Leadership Team considers both imminent matters and emerging trends while providing strategic guidance for our programs. The team is sponsored by our Senior Vice President and Chief Administrative Officer and is led by our Vice President-Environmental Services and Sustainable Development. Our Chief Operating Officer, business unit presidents, as well as vice president-level or senior staff from the safety, supply chain, security, human resources, sales, legal/compliance, and land and water functions comprise the team. The team solicits input from internal and external subject matter experts.

During the year, the team reviewed and addressed key issues and projects including:

- Evolving responsible sourcing frameworks and product branding initiatives, including the Responsible Mining Initiative's Risk Readiness Assessment, International Copper Association's "Copper Mark" and Cobalt Institute's Cobalt Industry Responsible Assessment Framework
- Development of ICMM's newly adopted Performance Expectations and plans for asset-level implementation and assurance
- Updates to the Freeport-McMoRan Sustainable Development Risk Register process that include additional topics with enhanced definitions for assessment that cover common areas of interest for downstream stakeholders
- Proposed update to the Corporate Responsibility Committee charter to include opportunities to improve the overall business resiliency to climate-related impacts and trends in public disclosures associated with climate change
- Opportunities for solar project development on or near company properties and renewable power contracting opportunities with utilities
- Trends toward increased ESG\* integration and consideration into investment decisions within mainstream financial sector organizations and related engagements with specific organizations including sustainability research firms
- Progress on strategic projects to secure long-term renewable water sources for operations
- Status of the company's initiatives to recruit and advance career opportunities for women in our workforce
- Key observations related to independent assurance of our sustainability programs, including implementation of the ICMM Sustainable Development Framework

\* Environmental, social and governance



In 2018, Cerro Verde partnered with over 1,100 community members, engineering associations, government institutions and local universities to test air and water quality around its operations. Above, participants examine air filter data after 24 hours of monitoring.

## STAKEHOLDER ENGAGEMENT

We inform, consult and involve communities and partners in order to develop and improve our policies, programs, projects and initiatives. We formally engage with community stakeholders across our portfolio, as well as economic partners and development institutions, government regulators, nongovernmental organizations (NGOs), community leaders and general members of the public. Annually, hundreds of entities are engaged via community foundations, formal grievance systems, community liaison officer interactions, workshops, participatory group panels, town hall meetings and topical surveys. Engagement also occurs through regulatory consultation processes with governmental entities and community groups, including with indigenous peoples.

Consistent dialogue allows us to work alongside community members to avoid and mitigate impacts and capture opportunities to implement projects that drive sustainability. Capacity building through engagement is critical to assisting communities to be resilient to downturns in commodity cycles and in planning for eventual closure of our operations.

In 2018, our corporate team engaged with over 100 investor organizations, sustainability analyst firms, banking institutions, NGOs, and multi-sector company sustainability teams regarding our programs and performance. Many of these organizations include multiple members or affiliations, thus expanding the reach of our engagement program. Our corporate team also works closely with our commodity sales departments to engage both downstream customers and international governmental agencies on sustainability programs and addresses specific environmental and social areas of interest that could affect access to markets for our various products. In addition, our operational-level teams regularly engage locally with community stakeholders, development institutions and civil society organizations. We believe that effective stakeholder engagement can help reduce sustainability-related risks and enable us to continue to deliver positive contributions to society.

In 2019, there has been increased interest from various organizations in our tailings management program following recent catastrophic tailings dam failures at unaffiliated mines. We are committed to engaging on specific measures associated with our tailings management and stewardship program.

## **PRODUCT STEWARDSHIP**

Product stewardship is critical to our business across the suite of minerals and metals we produce. It entails a variety of activities that allow continued market access for our products. These range from complying with chemicals management regulations related to transport and labeling to working with international NGOs to promote the use of sound science when assessing the health, safety and environmental risks associated with our products. Over the last few years, product stewardship has evolved to include demonstration of responsible production of our products to downstream users. As a result, we are enhancing our supply chain due diligence while continuing to implement increasingly advanced performance standards for mining and refining.

To address these needs, our cross-functional Product Stewardship Team engages downstream customers, responsible sourcing initiatives, commodity and trade associations as well as international governmental agencies on operational and product-specific sustainability topics. The team is led by our Vice President-Environmental Services and Sustainable Development and our Director-Product Stewardship with active participation by our global product sales, legal and business unit technical teams. During 2018, the team addressed topics including:

- Our participation and engagement with multiple commodity, business associations' and international governmental organizations' development of responsible sourcing frameworks including the International Copper Association's "Copper Mark" program concept
- Individual due diligence requests from downstream organizations for information related to our sustainability policies, programs and performance
- Evolving regulations that may require additional product labeling for certain of our products
- Enhancements to our Sustainable Development Risk Register assessment process that includes additional sustainability-related topics, such as climate-related impacts, that are of interest to value chain partners
- Further development of life cycle assessments for our products quantifying the environmental impacts of our products and considering inputs such as water, energy and raw materials as well as releases to water, land and air
- Compliance with global chemical legislation (e.g. the European Union's Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) program, U.S. Toxic Substances Control Act, and developing programs such as Korea REACH)

Moving forward, we will focus on advancing its product stewardship strategy by continuing to map its value chains – from raw material sources to end users – continuing to collaborate with key stakeholders and industry associations to advance responsible production and consumption and work closely with customers to understand their evolving requirements.



On January 9, 2018, the Climax mine celebrated the production of its 2 billionth pound of molybdenum, the same year Climax Molybdenum Company celebrated its 100th anniversary. Molybdenum improves the strength of low alloy steel, making the element ideal for lightweight applications such as fuel-efficient vehicles, power generation turbines and aerospace components.

## SUSTAINABLE DEVELOPMENT RISK REGISTER

The Freeport-McMoRan Sustainable Development framework is based on operation-specific factors and influences, including regional context, type and stage of operation and social setting. Essential to this framework is the Sustainable Development Risk Register process, which prioritizes the most significant risks that could have negative consequences to our business and our stakeholders across areas including health and safety, respect for human rights, environmental management, community development and economic impacts.

The Sustainable Development Department and senior, multi-disciplinary experts support operations so that prioritization processes are consistent with corporate procedures and provide associated thought input. Our Sustainable Development Risk Register process was updated during 2018 to include additional categorical topics with more extensive definitions for risk evaluation, which include climate-related impacts and consideration of the potential for human rights impacts across topics. This update is in part intended to reflect due diligence priorities of actors in the metals value chain, including members of the Responsible Minerals Initiative. In 2018, we also integrated an SDG alignment assessment into the process to track specific efforts in avoiding impediments to applicable goals. Cross-functional disciplines from all operations participated in a series of tutorials on application and use of the enhanced Risk Register process, and the revised process was implemented in the second half of 2018.

Sustainability Focus Areas identified through this process are annually reviewed by our Sustainable Development Leadership Team and communicated to our Board. Our current areas of focus are described on the following pages and throughout this report.



## **ANTI-CORRUPTION**

As a U.S.-based mining company with substantial assets located outside of the U.S., our business may be adversely affected by issues related to corruption. We maintain a robust anti-corruption training and reporting program in addition to our Principles of Business Conduct training. Any violation of the U.S. Foreign Corrupt Practices Act or other anti-corruption laws of jurisdictions in which we operate could result in significant criminal or civil fines and penalties, litigation and loss of operating licenses or permits. (p. 17)

## BIODIVERSITY

We own, lease and operate large land holdings, some of which are in and adjacent to areas of high biodiversity value. Our operations are managed to identify potential impacts and implement the mitigation hierarchy to avoid, mitigate or offset impacts to biodiversity, including during reclamation activities. (p. 31)

## **CLIMATE-RELATED IMPACTS AND OPPORTUNITIES**

We recognize that climate change poses significant near-term, medium-term and longer-term challenges for society. We also understand that climate change presents risks and opportunities for our operations and our financial performance. We aim to manage and mitigate, to the extent possible, climate-related risks to our business with the ambition of being a net positive contributor to climate solutions primarily through delivery of copper to global markets. (p. 25)

## COMMUNITY ENGAGEMENT AND DEVELOPMENT

Our social and economic development programs are designed to be responsive to issues raised by communities, including vulnerable groups and indigenous peoples, and to help us maintain good relations and avoid disruptions of operations. Nevertheless, social and political instability in the areas of our operations may adversely impact our operations. (p. 21)

## **HEALTH AND SAFETY**

The safety of our global workforce is our highest priority. Through implementation of our Fatal Risk Management program, we aim to eliminate fatalities by identifying and implementing critical controls and delivering multi-faceted training and enhanced communications throughout our workforce. (p. 15)



## HUMAN RIGHTS

Respect for human rights is a core value and we continue to conduct our operations consistent with the Universal Declaration of Human Rights and the United Nations Guiding Principles on Business and Human Rights. We are advancing site-level human rights impact assessments within our portfolio. Our operations may be adversely affected by security risks stemming from events including political instability, labor strikes and civil strife. The Voluntary Principles on Security and Human Rights serve as guidelines for our security and human rights programs. (p. 19)

## LABOR RELATIONS

Thirty-seven percent of our global employee base was covered by collective labor agreements at year-end 2018. We engage openly with our employees and union leadership to successfully negotiate and uphold labor agreements, recognizing that prolonged strikes or other work stoppages at our operations can adversely affect our business, our workforce and regional stakeholders. (p. 14)

#### **PRODUCT STEWARDSHIP**

Our product stewardship team engages downstream customers, upstream suppliers, industry associations and international governmental agencies on operational and product-specific sustainability issues. We believe that proactive engagement on product stewardship issues is mandatory to address risks associated with market access for our products. (p. 9)

## TAILINGS MANAGEMENT AND STEWARDSHIP

Through our tailings management and stewardship program, we employ substantial engineering expertise, technological monitoring, and operational and corporate management oversight to design, build, operate and monitor these facilities to minimize risk to employees, neighboring communities and the environment. We have a strong commitment from our Board and executive management team to provide the necessary resources to protect safety. (p. 28)

#### WATER SUPPLY AND MANAGEMENT

We recognize the importance of responsibly managing water resources at mining operations in both arid and wet regions. While all of our mining operations require secure and reliable quantities of water for mining and ore processing, most of our operations are located in arid regions of North America and South America. We maintain a global water management program designed to increase water use efficiency in our processes while minimizing the use of fresh water. (p. 27)



## **BUSINESS ETHICS**

Provide comprehensive training on our Principles of Business Conduct, including annual certification by management-level employees		All employees were trained in 2018, including a 100% certification rate by management-level employees.
With our online training module, annually train 90% of selected employees who interact with, or have the potential to interact with, government officials on anti-corruption laws, regulations and company policies and procedures	V	In 2018, 100% of the employees selected to participate in the online training completed the course.
WORKFORCE		
Increase the percentage of women in our workforce, including representation in managerial roles, to 15%	X	Women comprise 13% of our employee population and hold 12% of all managerial positions.
HEALTH AND SAFETY		
Incur zero fatalities	√	We incurred zero industrial-related fatalities at our operations in 2018.
Meet company wide total recordable incident rate (TRIR) of 0.70	X	At 0.71 for 2018, we did not meet our target TRIR.
HUMAN RIGHTS		
Incur zero gross human rights violations <sup>a</sup> at our operations caused by employees and contractors	√	We did not incur any gross human rights violations at our operations caused by employees or contractors.
COMMUNITIES		
Invest (in aggregate) 1% of the average of the previous three years' annual mining operations revenue (as reported in Freeport-McMoRan's audited consolidated financial statements) in community programs, including in-kind support and administration	V	Approximately \$155 million was invested in community programs across our operations (\$2 million above our 2018 target).
ENVIRONMENT		
Incur zero significant environmental events (consequence rating of three or higher on our Sustainable Development Risk Register)	X	During the year, we incurred one significant environmental event related to fugitive dust from Sierrita's tailings impoundment <sup>b</sup> .
Incur zero penalties in amounts exceeding \$100,000	√	Our operations did not incur any penalties exceeding \$100,000.

Note: All performance targets are annually recurring.

a. There is no uniform definition of gross human rights violations under international law; however, the United Nations Office of the High Commissioner report: The Corporate Responsibility to Respect Human Rights – An Interpretive Guide, provides guidance on identifying such types of violations.

b. The event primarily affected the community rather than the environment; this event violated Sierrita's air quality permit and may result in future penalties.



Successfully recruiting, retaining, developing and advancing talented employees from diverse backgrounds is key to achieving our business objectives. We offer rewarding careers as part of a team that, every day and everywhere, embraces our core values of SAFETY, RESPECT, INTEGRITY, EXCELLENCE and COMMITMENT.

## LOCAL HIRING AND SKILLS DEVELOPMENT

Hiring talent from regions where we operate incorporates local cultures and knowledge into our business systems while supporting local economies. We maintain tailored training programs to facilitate this objective.

In Arizona, our training partnership program with the San Carlos Apache Tribe is designed to increase the skills and employability of Apache students with our company or within other industries. Training, which includes life skills coaching, ranges from heavy equipment operations and maintenance to electrical applications. Over 1,200 students have entered the program through 2018, and approximately 50 percent have graduated. We currently employ 420 Native Americans and/or Native Alaskans, an increase of 24 percent year over year.

At PT Freeport Indonesia (PTFI), located in the remote province of Papua, Indonesia, we prioritize hiring indigenous Papuans. Approximately 98 percent of PTFI employees are Indonesian, 41 percent of whom are indigenous Papuans (up 5 percent since 2016). We are progressing our Papuan Sustainable Human Capital Development program to increase opportunities for indigenous Papuans – particularly those from the seven neighboring tribes – to join our workforce. The program includes a three-week course to enhance life and work skills by teaching teamwork, behavioral safety and workplace compliance expectations. To date, approximately 200 Papuans completed the program and have been hired by contractor organizations to work throughout PTFI operations.

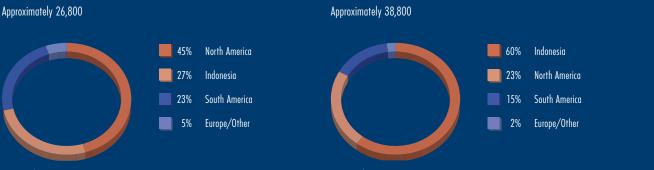
Our Nemangkawi Mining Institute (NMI) in Papua has placed over 2,700 apprentice graduates into full-time employee and contractor positions at PTFI, 90 percent of whom are indigenous to Papua. NMI continues to address skill sets needed for PTFI's underground mining operations.

PTFI has supported the continuing education of nearly 300 of its employees in recent years (including 118 Papuans), through a combination of scholarships and partnerships with exchange programs both in Indonesia and other countries. The PTFI internship program also has provided educational opportunities to nearly 600 interns (including 120 Papuans) since 2013.

In addition to these training programs, our global Organizational Development Team facilitates organizational performance improvement utilizing varying tools and processes with our employees throughout their careers. For example, our Leadership Development Program includes courses aimed toward enhancing the skill sets of existing and future leaders in areas including communication methods, mentoring and time management.



Freeport-McMoRan's training partnership program with the San Carlos Apache Tribe provides vocational skills and job opportunities to Native American men and women. Above, instructor Rick Opitz (left) leads Harvina Bendle and Anthony Gooday in a heavy equipment maintenance lesson.



**EMPLOYEES** 

**CONTRACTORS** 



Seeking ways to foster career development opportunities for women is a company-wide objective. Vicki Seppala held numerous engineering and supervisory roles at our operations in North and South America before becoming General Manager of the Climax mine.

## **INCLUSION AND DIVERSITY**

We operate in regions of varying ethnic, religious and cultural backgrounds and are generally the largest employer in local communities. The diverse backgrounds, experiences and perspectives within our workforce are assets, and we promote the acceptance and inclusion of different perspectives and backgrounds. We prohibit discrimination and harassment, and our PBC and Human Rights Policy require that all employees treat everyone in and around our operations with dignity and respect.

We promote a positive and productive work environment where every employee is respected and valued. We do not tolerate any form of harassment or discrimination against individuals on the basis of race, color, sex, religion, national origin, disability, age, veteran's status or any other characteristic protected by applicable law.

It is our policy to make all employment decisions on the basis of the essential functions of a position and the qualifications of each individual for that position, and provide equal pay and benefit opportunities to persons with substantially similar skills, performance and job responsibilities. Such decisions are also based on facts and business needs rather than favoritism or bias.

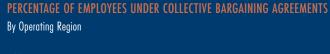
Seeking ways to recruit and foster career development for women in our company is important, as women historically have been underrepresented in the mining sector. Women serve in key management roles within our organization, including our Chief Financial Officer and two members of our Board, while approximately 330 women hold manager-level or higher positions. We continue to make progress toward our target of increasing women in our global workforce as well as in managerial roles to a minimum of 15 percent. The percentage of women in our company is about 13 percent globally (up from 11 percent one year prior) and varies across geographies, from a high of 18 percent in North America to a low of 7 percent in both South America and Indonesia. In 2018, we used feedback from a survey of female employees in North America to determine the best interventions for raising internal awareness, increasing training opportunities, creating a more inclusive culture, improving female retention rate and giving women equal opportunities for career advancement. In 2019, we are launching a global initiative to further strengthen our focus on inclusion and diversity in the workplace.

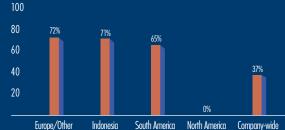
## LABOR RELATIONS

We respect the rights of our workers to freedom of association and collective bargaining and that workers' rights to join a union are maintained. We do not tolerate any form of harassment, discrimination or retaliation, including violent or threatening behavior, within our workforce, including against union or non-union members. This is reinforced in our mandatory PBC training for all employees and the ability for anyone to report suspected violations without retaliation through our global Compliance Line.

We work cooperatively with 15 unions in eight locations worldwide. Thirty-seven percent of our employee population is covered by collective labor agreements (CLA), with 21 percent of employees covered by agreements scheduled to expire in 2019.

During 2018, a new CLA was reached at Cerro Verde with no work stoppages and ahead of the legally regulated process. At Rotterdam, a CLA was also agreed on with no interruptions to operations and within the legally appointed time frame.





Our highest priority is the health and safety of our employees and their families. Our objective is for zero workplace fatalities, injuries and occupational illnesses. We are committed to providing a safe and healthy workplace and providing the training, tools and resources needed to identify risks and consistently apply effective controls. We share information about potential fatal events, near misses and best practices throughout the company and engage with industry peers to continuously improve our health and safety performance.

Our philosophy of SAFE PRODUCTION is demonstrated by the integration of health and safety practices in all aspects of our operational activities. Our Occupational Health and Safety Management System (OHSMS) is the framework under which we prioritize and manage risk as well as address compliance obligations. We maintain a corporate group certification to the internationally recognized Occupational Health and Safety Assessment (OHSAS) 18001 Standard. This certification requires third-party registrar site-level verification that we operate in a manner consistent with OHSAS and with a goal to prevent fatalities and reduce incidents. A total of 23 combined systems audits were conducted across our core operations to verify certification requirements in 2018.

We measure our safety performance through regularly established benchmarks, including our company wide Total Recordable Incident Rate (TRIR). In 2018, our TRIR (including contractors) was 0.71 per 200,000 man-hours worked, missing our 0.70 target for the year. Low-energy events, such as sprains and strains, at certain operations in North America adversely affected our TRIR.

We worked 131 million hours in 2018 compared to 117 million hours in the prior year, and we recorded a total of 464 reportable injuries in 2018 compared to 444 in 2017. We are seeing a downward trend in the number of highenergy safety incidents in recent years, as we have focused our safety programs on workplace tasks with the highest potential consequences.

#### HEALTH AND SAFETY SUMMARY DATA

Including Contractors

	2018	
Workplace Fatalities	0	
Total Recordable Incident Rate	0.71	
Occupational Illness Cases	42	

TRIR = [(Fatalities + Lost-time Incidents + Restricted-duty Incidents + Medical Treatment) x 200,000] / Total Hours Worked



Geomechanical engineers use instruments such as radar and GPS to detect conditions that could lead to pit slope failure. Above, Engineers Caesar Oppong and Enrique Silva calibrate a radar unit that scans for slope movement at Tyrone operations.

Our health and safety performance and associated reporting encompass our direct employees as well as contractors. The Freeport-McMoRan Contractor Health and Safety Manual defines the minimum expectations and requirements for contractors working at our operations. As with our employees, site-specific health and safety training is conducted with contractors that is tailored to critical control implementation and includes the Fatal Risk Management policies and processes discussed below.

#### FATAL RISK MANAGEMENT

To achieve our objective of incurring zero workplace fatalities we have begun implementation of a Fatal Risk Management (FRM) program, which is the evolution of our Fatality Prevention initiative. The FRM requires that we identify potentially fatal risks in the field and apply the controls most critical for avoiding fatal consequences associated with the task. This includes verification and auditing of critical controls, as a leading indicator, to assess their proper utilization and effectiveness. To date, we have identified 23 potentially fatal risks that are common across some or all of our operations, and we have placed fatal risk icon placards at work areas where these risks are present.

Every employee is responsible for their safety and the safety of those in the environment where they work. Our culture of Safe Production and leading by example at all levels of the organization supports our FRM implementation. In particular, our front-line supervisors play a vital role in reviewing assigned tasks for the shift and assisting crew members with identifying potentially fatal risks. Supervisors use tools such as pre-task critical control verification checklists that are customized for specific fatal risks. These tools promote quality conversations to be confident that everyone on the job understands the hazards and required critical controls. Anyone on the job is expected to **STOP WORK** immediately if critical controls are missing, deemed not effective or unsafe conditions exist.



Critical control verifications prioritize high-risk tasks that rely more on behaviors than engineered controls and provide immediate leading indicator data to strengthen the FRM and our overall Health and Safety system. We are utilizing a mobile platform that guides users through a checklist to validate that necessary critical controls are in place and effectively implemented for a particular task with exposure to a fatal risk. The system captures any variance with our critical controls and allows us to create action plans to address these gaps.

Health and Safety system improvements in 2018 include:

• Introduced streamlined Health and Safety policies and process documents across the organization for clarity and focused applicability in the field; this includes the

Contractor Health and Safety Manual which was updated to clarify company expectations.

- Developed a Management of Change (MOC) Policy and Guidance to apply to potential changes in the workplace that can result in unplanned adverse impacts on processes, systems and/ or people. The MOC requires the proper level of review of the proposed change by multi-disciplined personnel with appropriate skill sets. The purpose includes avoiding consequences of unforeseen safety hazards and ensuring changes are communicated to all applicable personnel.
- Began a review to improve our Root Cause Analysis (RCA) process to give us confidence that we are asking the right questions to "drill

Manage Your Fatal Risks

Steps to Prevent the Event



over 50 global operational and corporate leaders convene to review and understand the findings as well as share ideas for future preventative measures. This creates a better understanding of the event for communication across the organization.

- Conducted external expert evaluation of the weekly activities of our Health and Safety professionals to review opportunities to reduce administrative tasks that could impede SAFE PRODUCTION leadership efforts in the field.
- The OSHAS 18001 standard is being replaced by the Occupational Health and Safety Management Systems of the International Organization for Standardization (ISO) 45001 and will be retired in March 2021. Planning for the

transition to ISO 45001 began during the year with full company-wide conversion expected by 2021.

## **OCCUPATIONAL HEALTH**

All of our operations maintain comprehensive occupational health programs to assess the risk of exposure to occupational health hazards and identify controls for those risks. Our Field Guide for Occupational Health and Industrial Hygiene defines occupational exposure limits, standards and practices that apply globally. Forty-two occupational illness cases were reported at our operations during 2018 compared to 38 the prior year.

We continued the expansion of medical monitoring procedures in 2018 to assess if employees are fit for duty, to look for early indications of occupational health impairment and to

down" far enough to gather underlying causes of events, including what behavioral factors lead to conscious breaches of safety policies and procedures. This project includes an assessment of the leadership qualities and capacity necessary to effectively conduct robust RCAs.

Initiated a global executive review of Potential Fatal Events (PFE). As soon as possible after a PFE occurs, provide opportunities for early intervention. We continued to expand our FRM to review exposures to carcinogens and hazardous substances that could result in acute or chronic effects in addition to traditional safety hazards. These efforts are expected to lead to identifying improved critical controls, particularly related to dust controls, ventilation systems and chemical process monitoring.

FREEPORT-MCMORAN

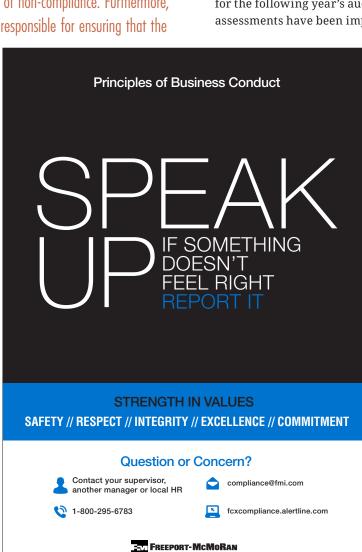
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We are committed to the highest level of ethical and legal conduct. The Freeport-McMoRan Principles of Business Conduct (PBC) are a commitment to integrity and define the expected behavior of all employees and our Board. We conduct comprehensive training on our PBC, including annual certification by management-level employees. This process consists of computer-based training, as well as a signed certification that the employee understands the PBC and is not aware of cases of non-compliance. Furthermore, managers and supervisors are responsible for ensuring that the

employees who report to them understand these principles.

## **ANTI-CORRUPTION**

Corruption is sometimes widespread in local government systems and cultures near our operations. We do not tolerate the offering or payment of bribes, kickbacks or other similar payments to any person or organization or government official to secure advantages for our business. Likewise, we do not accept any of these payments. Our Anti-**Corruption Policy and** Guidelines require compliance with the U.S. Foreign Corrupt Practices Act (FCPA) and other relevant anti-corruption laws, including local laws.



In recognition of the potential legal liability that could result from actions of our business partners under the FCPA and other laws, the company implements an online due diligence platform, the Freeport Compliance eXchange (FCeX). FCeX is a survey-based software platform designed to assess risk in the areas of anti-corruption, international trade and human rights. FCeX has enhanced the company's ability to identify, assess and mitigate compliance risks.

Annually, we perform company wide audits with the assistance of our internal audit firm to assess risk and plan for the following year's audit strategy. Formal fraud risk assessments have been implemented at Atlantic Copper, El

> Abra, Cerro Verde, PTFI and our corporate offices and mapped with business controls which are tested and reviewed annually. The fraud risk assessments consist of more than 100 risk scenarios across more than 15 process areas, such as Asset Management, Purchasing, Payables and Financial Reporting. All of these risk assessments include corruption as a risk factor.

## **INFORMATION AND REPORTING**

Among other reporting mechanisms, Freeport-McMoRan maintains a Compliance Line to provide guidance and assistance to workforce members with any questions or concerns related to our PBC, policies or procedures. To encourage our workforce to report potential violations of business conduct, our Compliance Line allows anonymous reporting.

During 2018, 257 reports were made through the

We deployed a new anti-corruption online training module in 2017. The training is mandatory for annual completion by select groups of employees utilizing a risk-based approach. For example, senior-level employees who may interact with government officials are required to complete the training. The online training does not replace our existing classroom training programs; rather, it supplements our existing systems and extends the reach of our overall compliance efforts. Freeport-McMoRan Compliance Line relating to various topics, including employee workplace conduct, environment, health and safety, protecting company assets and conflicts of interest. All reports are investigated and, if substantiated, appropriate disciplinary action is taken, up to and including termination of employment.



We believe that increased transparency of revenues and payments promotes better governance and accountability regarding the management of natural resources. Above is the Plaza de Armas in Arequipa near our Cerro Verde mine, one of Peru's largest mining operations.

## TRANSPARENCY OF GOVERNMENT PAYMENTS

Freeport-McMoRan has endorsed and committed to support the Extractive Industries Transparency Initiative



(EITI) since 2008. EITI is a global standard to promote transparent and accountable

management of natural resources. The initiative is a commitment by governments to disclose revenues received and by oil, gas and mining companies to disclose natural resource payments to governments in an annual EITI report. In implementing countries, governments, extractives companies and civil society work together in a multistakeholder group forum. We have significant mining operations in Indonesia and Peru, both of which are EITI implementing countries. Senior-level PTFI and Cerro Verde personnel actively support the in-country EITI processes. We have hosted site visits for the EITI board and associated stakeholders as well as provided sponsorship to regional conferences and the tri-annual global conference.

Freeport-McMoRan publicly discloses its material contracts and supports contract transparency in the extractives sector. Payments made to host governments via taxes, royalties and other obligations significantly contribute to national, regional and local development. In addition to our country-level EITI commitments, we voluntarily report annual cash payments to governments, including sub-national payments, in all regions where we conduct business, as presented in the table below.

#### CASH PAYMENTS TO GOVERNMENTS<sup>®</sup>

FOR THE YEAR ENDED DECEMBER 31, 2018 (\$ MILLIONS)	U.S.	CHILE	PERU	INDONESIA	OTHER COUNTRIES <sup>6</sup>	TOTAL
Corporate Income Taxes, Net of Refunds	\$ (3)	\$ 16	\$ 162	\$ 705	\$ 22	\$ 902
Withholding Taxes on Foreign Dividends		2	1	182		185
Employee Payroll Taxes <sup>c</sup>	309	11	83	54	23	480
Dividends				148		148
Royalties and Net Severance Taxes	24	1	41	214		280
Property Taxes	81			17	2	100
Other Taxes and Fees <sup>d</sup>	52	13	68	207	(26)	314
TOTAL	\$ 463	\$ 43	\$ 355	\$1,527	\$ 21	\$2,409

a. This schedule reflects a voluntary effort by Freeport-McMoRan to capture its cash payments to governments (net of refunds).

b. Represents cash payments to governments by Freeport-McMoRan's other business groups that are located outside of the countries where Freeport-McMoRan conducts its primary operations.

c. Includes payroll taxes collected on behalf of employees and paid to governments.

d. Includes customs and export duties as well as withholding tax on foreign services.

Our Human Rights Policy, first established in the late 1990s and most recently updated in 2017, commits us to respecting human rights, conducting business in a manner consistent with the Universal Declaration of Human Rights and implementing the United Nations Guiding Principles on Business and Human Rights.

To meet these commitments, we continue to conduct site-level human rights impact assessments (HRIAs) using a framework

#### UNITED NATIONS GUIDING PRINCIPLES ON BUSINESS & HUMAN RIGHTS

aligned with the UN Guiding Principles (UN Guiding Principles), the scope of which is summarized in our Human Rights Dashboard. We also continue to integrate human rights

considerations across relevant business functions. In 2018, associated activities included:

- Launching a corporate level Human Rights Working Group to support our site-level implementation of the UN Guiding Principles.
- Updating our Sustainable Development Risk Register process to include additional categorical topics with more extensive definitions for risk evaluation, including consideration of the potential for human rights impacts across topics.
- Advancing the development of responsible sourcing due diligence programs for the goods and services we procure as well as for metals that we purchase from third-party sources for further processing.

• Continuing to engage the financial community, civil society, downstream customers, responsible sourcing initiatives, commodity and trade associations as well as international governmental agencies on a regular basis. This included organizing a set of international-level stakeholder meetings to provide updates and receive feedback on our human rights program, including the results of the Cerro Verde HRIA as well as making presentations via multi-stakeholder forums.

We promote human rights awareness through engagement with host governments and local communities as well as by providing training to employees and contractors. We conduct our security activities using the Voluntary Principles on Security and Human Rights as guidelines.

While we seek to avoid causing adverse impacts, we acknowledge that they may occur despite our best efforts. We have multiple mechanisms for employees, community members and members of our supply chain to report concerns. We are continuing our global grievance review project to test these internal and external grievance mechanisms against the UN Guiding Principles effectiveness criteria (i.e., legitimate, accessible, predictable, equitable, transparent, rights-compatible, a source of continuous learning, and based on engagement and dialogue). In 2018, this included internal benchmarking and leveraging an employee training platform and existing stakeholder engagement mechanisms to solicit feedback from employees, community members, suppliers and other third parties on their knowledge of and trust in our grievance mechanisms

EMPLOYEES	EMPLOYEES VALUE CHAIN COMMUNITY ENVIRONMENT		THIRD PARTIES			
Working conditions	Working conditions	Standards of living / quality of life	Pollution	Conduct of private security forces		
Safe and healthy working conditions	Safe and healthy working conditions	Community health and safety	Water security	Conduct of government security forces		
Discrimination	Discrimination	Economic activity / livelihoods	Waste and hazardous materials management	Contribution to conflict		
Freedom of association and collective bargaining	Freedom of association and collective bargaining	Minorities and indigenous peoples	Increased exposure to natural hazards	Presence of artisanal / small-scale miners		
Child labor	Child labor	Displacement / resettlement		Corruption		
Privacy	Privacy	Cultural heritage		NGOs and civil society groups		
Forced and compulsory labor	Forced and compulsory labor	Children's rights, including access to education		Judicial system (access to remedy)		

## HUMAN RIGHTS "DASHBOARD"

Topics reflected in the dashboard are mapped against recognized international human rights



as well as how these might be improved. These mechanisms help us address concerns early and remediate impacts directly. We do not tolerate retaliation against anyone who raises a question or concern in good faith and will protect the confidentiality of anyone who reports suspected violations.

## **CERRO VERDE HRIA**

We engaged Verisk Maplecroft to carry out an HRIA at our Cerro Verde operation in Peru in 2017. Many of the risks and impacts identified are subject to established human rightsrelevant management systems. Where the findings identified gaps in Cerro Verde's management systems, cross-functional teams developed action plans. Actions were selected based on the severity of impact, whether an actual or potential impact, the time sensitivity of remediation (e.g. likelihood of continued harm) and company influence/leverage. Priority areas varied and included an allegation by an anonymous stakeholder that a small number of workers may be experiencing serious health impacts linked to on-site activity, the need for greater visibility of supplier risk exposure, and stakeholder perceptions related to environmental impacts and associated monitoring.

## NEW MEXICO OPERATIONS HRIA

In 2018, we engaged Verisk Maplecroft to carry out an HRIA at our New Mexico operations in the U.S. Fieldwork included extensive direct engagement with more than 150 stakeholders in and around our Chino and Tyrone mines in Grant County. This included a range of actually or potentially affected rights holders as well as those with insight into such rights holders. Key findings included a set of medium severity health and safety impacts reflecting the risks typically associated with mining-related activities, a relatively significant volume of moderate and low-severity impacts relating to standards of living/quality of life (including noise, vibration, speeding vehicles, traffic, light pollution, impacts on views, etc.), and alleged and/or actual impacts on air quality (including dust and odors).



Freeport-McMoRan

Megan Kuefler, Manager-Business and Human Rights, presents the New Mexico operations Human Rights Impact Assessment project plan at a Grant County Community Partnership Panel meeting.



Cerro Verde's Security Department partnered with fellow Voluntary Principles member Socios Perú to sponsor a three-day human rights seminar for over 260 Peruvian National Police members who serve in the Arequipa region.

The Chino and Tyrone teams are reviewing the results of the HRIA to develop action plans to address priority risks and impacts. Action plans will be embedded within Chino and Tyrone's Sustainable Development Risk Register process to support the continuous improvement of their existing systems and processes. Where necessary, these will establish new measures to investigate, prevent, mitigate and/or remedy identified human rights risks and impacts. Lessons learned from site-level HRIAs are shaping our global human rights strategy as well as site-level HRIA work at other operations.

Please refer to the Human Rights section of our website for more information on both the Cerro Verde and New Mexico HRIAs as well as our overall human rights approach.

## **SECURITY**

The Voluntary Principles on Security and Human Rights serve as guidelines for our security and human rights



programs, including interactions with host government police and

military personnel as well as private security contractors. Our 2018 Annual Report to the Voluntary Principles Plenary includes country implementation details for Indonesia and Peru, as these countries represent our higher risk environments in terms of security and human rights. The report includes information on a series of sporadic shooting incidents experienced by our PTFI operation in Indonesia between August 2017 and August 2018 as well as security incidents at its Amamapare port.



With a social investment from El Abra, 28 families in the indigenous village of Cupo now have access to clean, running water.

By its nature, mining creates impacts on local communities. Working with local stakeholders, we implement mitigation measures for unavoidable adverse impacts and seek to maximize the delivery of positive, lasting social benefits.

We engage with local stakeholders and their legitimate representatives throughout project lifecycles to build relationships and the trust needed to create shared benefits. Our Community Policy mandates engagement and collaboration with local communities to minimize and mitigate unavoidable adverse impacts while maximizing opportunities to deliver value from our presence.

Open, transparent and regular engagement with a wide range of local stakeholders builds our understanding of their interests and concerns, encourages communities to provide input into our operations and development projects and promotes understanding of our business. This helps reduce risks to our operations and our ability to deliver on our community development and engagement plans. Open communication and dialogue with local stakeholders and their representatives take a number of forms - formally

through open house meetings linked to regulatory processes, informally through interactions with our community development specialists in the field and via community partnership panels, community investment funds or foundations and targeted capacity building efforts.

## **COMMUNITY INVESTMENT**

Freeport-McMoRan's community investment strategy addresses high-priority needs and facilitates local capacitybuilding with the goal of enabling community well-being, resiliency and sustainability. We are increasingly focused on investing in the "sustainability of people" - enhancing the skills and opportunities individuals need to reach their full potential and play a progressively active role in the prosperity of their own communities. Through our active engagement and capacity building efforts, we work with stakeholders to understand what contributes to community welfare, such as health, interconnection, learning, attainment, growth, economic opportunity, affordability and financial security. By understanding more about what makes our communities thrive, we can work together to deliver more impactful investments.

In partnership with communities and local governments, many of our social investment programs align with and advance the United Nations Sustainable Development Goals (SDGs) or help mitigate impediments to their realization, particularly the Goals of Good Health and Well-being (SDG 3), Quality Education (SDG 4), Gender Equality (SDG 5), Clean Water and Sanitation (SDG 6), and Decent Work and Economic Growth (SDG 8).

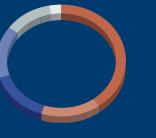
In addition to direct community investment from individual operations and the Freeport-McMoRan Foundation, we have established community trust funds or foundations in Chile, Indonesia and the U.S. We maintain established Community



Cerro Verde is celebrating the 10-year anniversary of the Uchumayo nursery, an innovative research and training center with doors open to students and the general public. The nonprofit nursery has supplied over 800,000 seedlings of various native species for reforestation efforts in Arequipa.

# \$155 million

**2018 COMMUNITY INVESTMENT** 



**Community Trust Funds** 40% Safety, Health and

- Environment 15% **Economic Development** 
  - and Infrastructure
  - 15% Other\*
  - Education and Training
  - Administration
- \* Includes arts, culture, resettlement, mitigation, stakeholder engagement and employee programs, such as Matching Gifts and United Way



Investment Funds for communities near our operations and a Native American Partnership Fund for tribal communities in the U.S. These funds typically are managed by community members who determine the allocation of resources to priority programs that strengthen the foundational elements of sustainable communities, including education, health, economic development and the environment.

With most of our mining operations located in rural and remote areas, Freeport-McMoRan maintains a significant focus on supporting efforts aimed at building capacity and increasing economic diversification to reduce dependency on our presence. This includes building a foundation of resiliency during times of commodity market fluctuations as well as a post-mining future.

We invest significantly in supporting development of small businesses and the ecosystems critical to their success. The centerpiece of this work is "DreamBuilder - The Women's Business Creator," our online entrepreneurship education and training program for women who want to start or grow their own small business. Now in its ninth year, we continue to expand and engage women in the U.S., Chile, Peru and beyond. Since inception, over 40,000 women across 65 countries have leveraged DreamBuilder to equip them with the resources needed to become financially independent business owners. Further, Freeport-McMoRan's Financing Your Dream companion course helped women create Capital Action Plans to identify and secure funding needed to start and sustain their businesses. The latest survey indicates approximately 56 percent of participants have increased sales, 34 percent hired additional employees, and 66 percent pay themselves a salary (as compared to only 18 percent who did so prior to DreamBuilder).

As part of a "G5 Collective," a coalition of multi-sectoral partners, we have committed to invest a minimum of \$5 million to implement additional activities focused on women's empowerment in Chile, Peru, Indonesia and the U.S. by 2021. Members of the Collective are working to advance SDG 5, particularly focusing on women's economic participation, addressing violence against girls and women and advancing female leadership in the private and public sectors. As part of this effort, we embarked upon a new partnership with Vital Voices (VV) to develop a fellowship program to support women's leadership in public life. The VV Engage program was launched in 2018, and the first cohort of 25 women fellows from across the globe, including countries where we operate, was established.

In Indonesia, PTFI has committed to provide one percent of its annual revenue for the development of indigenous Papuan communities through the Freeport Partnership Fund for Community Development. The Amungme and Kamoro Community Development Foundation (LPMAK) is the Papuan community organization that oversees disbursement of these program funds. LPMAK is governed by a Board of Commissioners and a Board of Directors, both

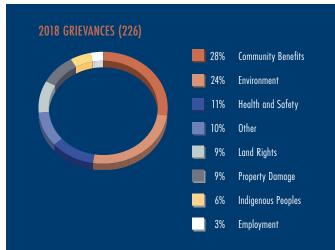


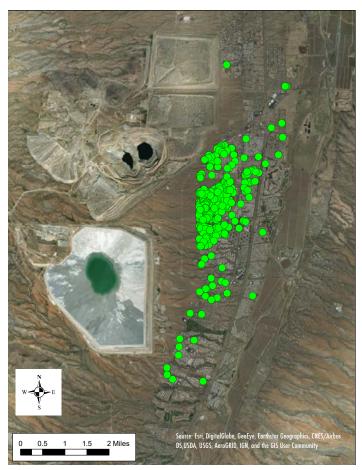
The Freeport Partnership Fund for Community Development in Indonesia provides access to education for more than 480 indigenous children from remote areas to schools such as the Taruna Papua School and Dormitory near Timika shown above. Since inception, the partnership fund has provided over 11,000 scholarships to Papuan students.

comprised of representatives from local Amungme and Kamoro communities, local government, Papuan regional leaders, church leaders and PTFI. PTFI's contribution to the Partnership Fund was \$55 million in 2018 and over \$790 million since its inception in 1996. In 2018, PTFI and LPMAK signed an agreement extending the funding arrangement between the two organizations through June 2019. PTFI also initiated a process to convert the structure of LPMAK into an Indonesian foundation, a process expected to be completed by the end of 2019. During the transition, the Partnership Fund will continue to be capitalized with no interruption in implementation of approved health, education and economic development projects and programs. Once the transition is complete, a new Board structure and composition will strengthen the long-term effectiveness of PTFI's social investments with a goal that the new foundation will achieve financial self-sufficiency before mine closure.

#### COMMUNITY GRIEVANCE MECHANISMS

Our site-level community grievance mechanisms are tailored to local cultures and allow us to document and respond to issues and concerns raised by local community members





Sierrita successfully worked with Green Valley and Sahuarita residents to address approximately 630 complaints (from locations shown in green) received via its Community Information and Grievance Line related to a series of dust events in October 2018.

in a timely manner. Grievances are typically received by Community Liaison Officers (CLOs) in the field, through engagement at established company/community forums, in physical drop boxes or via local telephone hotlines. Regardless of how grievances are received, they are reported to the site Community Grievance Officer, who relays the grievance to the relevant department for evaluation. CLOs help investigate grievances and work with community members and their representatives to address concerns, solve problems, and mitigate and remedy impacts. For grievances with potential high community impacts, company management is involved and applicable government authorities are engaged as needed.

During 2018, 226 community grievances were recorded at our global operations in addition to approximately 630 grievances related to dust events at our Sierrita operation in Arizona. Regardless of the type and credibility of the allegations, all cases reported are documented, reviewed and closed once a final decision is made and subsequent action is taken.

We are reviewing our community grievance procedures against the effectiveness criteria outlined in the UN Guiding Principles. In addition to conducting internal benchmarking, we engaged with a set of community stakeholders to obtain their feedback via our formal Community Partnership Panel meetings in the U.S. as well as our site-level HRIA processes. These inputs are informing updates to our community grievance process, which we expect to be completed in 2020.

#### **INDIGENOUS PEOPLES**

Our local stakeholder engagement and social investment objectives include formal interactions with indigenous peoples in Papua, Indonesia, Native Americans in the United States, and the traditional communities of Alto El Loa in Chile. Through community engagement, cultural promotion and preservation projects, as well as training and development programs, we seek to address needs while being sensitive to cultures and customs of indigenous peoples near our operations. Engaging with groups focused on indigenous peoples rights at the local, national and international levels also is important for sharing information about approaches to effectively engage with indigenous peoples in diverse geographies.

In the U.S., we continue to build on our relationships with federally recognized Native American Tribes in the southwest, including the Hualapai Tribe, the San Carlos Apache Tribe, the Tohono O'odham Nation and the White Mountain Apache Tribe. We are engaging tribes that have historically occupied areas near our operations and those with ancestral connections to these lands. We are also evaluating how free, prior and informed consent fits within established regulatory processes in the U.S.

By engaging with the tribes and co-designing initiatives to meet mutual needs, we have been able to further advance our Native American Partnership Fund, Community Activities Contributions and Scholarship Program. Over the last five years, 243 college scholarships have been awarded to tribal



2018 WTSD REPORT

A book documenting the customs and traditions of the indigenous community of Chiu Chiu recently was published as a means to help preserve its cultural heritage. The publishing, with financial support from El Abra, followed a year of community-led research.



members through our Native American College Scholarship Program. An additional 32 women entrepreneurs from our partnership tribes have been trained to start or grow small businesses on their respective reservations through Project DreamCatcher, a one-week, small business training program for women. Our technical training institute for tribal members interested in pursuing jobs in mining and related industries continues to be a mutually beneficial program, training 1,272 tribal members and placing 326 in trade jobs over the past five years.

We continue to evaluate a large-scale brownfield expansion opportunity at our El Abra operation in Chile, where we maintain relationships with indigenous communities. As we advance studies to determine the scope and timing of the project, we are committed to respecting the rights, interests, aspirations, culture and natural resource-based livelihoods of these indigenous communities in project design, development and operation. We seek to achieve their free, prior and informed consent where significant adverse impacts are likely to occur, and capture the outcomes of engagement and consent processes in agreements or resolutions.

Collaboration with existing communities and early engagement with two additional indigenous communities located near the potential expansion project's power and water corridor continued in 2018, resulting in changes of the corridor route to an alternative proposed by both communities. Further engagement with eight additional indigenous groups in Calama, including the Indigenous Women's Association and the Indigenous Traditions and Customs Alto El Loa Association Lickan Antay, was advanced, which allowed El Abra to better understand the communities' relationship with the region.

To complement the Indigenous Peoples Employment Program established in 2017, El Abra implemented a new apprenticeship program to provide work experience to students who have completed post-secondary education. Seven communities currently participate in the Indigenous People Employment Program and by the end of 2018, more than 50 positions had been filled by members of neighboring communities.

In Papua, Indonesia, a culturally diverse region, PTFI has engaged with indigenous Papuan tribes for decades, including through multiple formal agreements that promote workforce skills training as well as health, education and basic infrastructure development. PTFI has financed several books documenting the social uniqueness of the Amungme and Kamoro tribes. PTFI also collaborates with an NGO focusing on the preservation and promotion of Indigenous art through regular exhibitions, school visits and support for art festivals around Indonesia.

PTFI continues to work with Kamoro community members to review and mitigate the impacts of the Levee Extension project, which helps us meet the requirements of the Environmental



In coordination with local governments and NGOs, PTFI invests substantial resources to help indigenous populations to reduce public health risks.

Impact Assessment approved by the Government of Indonesia that tailings remain with the Modified Deposition Area (ModADA). PTFI's multi-stakeholder approach includes both a water transportation program and economic development activities suited for Kamoro culture. Under the program, developed in consultation with village members, PTFI operates an integrated passenger boat and bus service to provide regular transportation services between coastal villages to the east of the tailings deposition area as well as access to health care, education and economic trade facilities available in the Timika region to the west. PTFI works with the Kamoro to strengthen economic activities and support increased production and marketing of local commodities. This includes a fisheries program, which PTFI supports in partnership with the Catholic church; the introduction of cocoa as a cash crop and a karaka (mangrove crab) aquaculture program for Kamoro youth. PTFI also collaborates with the Mimika government to develop a coconut plantation in Manasari and is working with Kamoro community members to reinvigorate a sago plantation in Nayaro.



For more information on our community programs, please visit the Communities section of our website and freeportinmycommunity.com.

The Freeport-McMoRan Environmental Policy, updated in 2018, is based on our objective to be compliant with laws and regulations and to minimize environmental impacts using risk management strategies based on valid data and sound science. It requires that we review and take account of the environmental effects of each activity, whether exploration, mining or processing, and that we plan and conduct the design, development, operation and closure of facilities in a manner that optimizes the economic use of resources while minimizing adverse environmental effects.

All of our mining and mineral processing operations maintain Environmental Management Systems (EMS) certified to ISO 14001:2015, which are independently audited on an annual basis. As part of the EMS, employees and contractors are trained on site-specific subject areas, including chemical management, waste management, air quality controls, and spill prevention and response. In addition to job-specific training, workforce members receive annual environmental refresher training and are monitored and supported in the field by environmental professionals. Site management teams identify, manage and mitigate environmental risks through our structured risk register process.

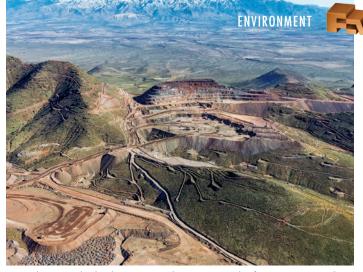
During 2018, we conducted internal environmental audits at 10 operations, and our facilities were inspected by governmental regulatory agencies on approximately 100 occasions. Since 1996, an independent environmental audit has been conducted at PTFI every three years. An executive summary and responses to the 2017 audit recommendations are posted on our website. All operations have corrective action programs associated with the overarching EMS as well as audit and inspection findings.

When operations receive a Notice of Violation (NOV) from a regulatory agency such as shown in the table below, the citations typically have involved brief and minor exceedances of permit conditions or other record keeping violations, which have zero or minimal environmental impact. We had two dust-related NOVs in late 2018 at Sierrita.

#### ENVIRONMENTAL COMPLIANCE INDICATORS

	2018
Reportable spills or releases of hazardous or toxic chemicals	15*
NOVs related to permit exceedances, spills, releases or other compliance matters	13
Environmental Penalties	\$0

\* Excludes PTFI where approximately 70 reportable spills occurred, including a high percentage from pipeline sabotage.



An initial project to develop the Lone Star oxide ores commenced in first-quarter 2018, with associated first cathode production from Safford processing facilities expected by the end of 2020. This work has contributed to approximately 27 percent of Safford operation's greenhouse gas profile during 2018.

#### CLIMATE-RELATED IMPACTS AND OPPORTUNITIES

Freeport-McMoRan recognizes that climate change poses significant near-term, medium-term and longer-term challenges for society. We also understand that climate change presents risks and opportunities for our operations and our financial performance. We aim to manage and mitigate, to the extent possible, associated risks to our business with the ambition of being a net positive contributor to climate solutions through delivery of copper to global markets.

## **DID YOU KNOW?**

Copper has an extremely long and productive life that is critical to achieving the UN SDGs and enabling the global energy transition. To produce a metric ton of primary copper cathode, approximately 4.8 metric tons of carbon emissions are emitted to the atmosphere. However, because of copper's effectiveness in electrical applications, between 100 and 7,500 tons of  $CO_2$ emissions can be reduced as a result of that investment, resulting in a mitigation factor of up to 1,500 to 1. In fact, the International Copper Association estimates that by 2030, copper could reduce global carbon emissions by 16 percent. Furthermore, that investment in copper is a good one – over two-thirds of copper produced since the 1900 is still in use today – with over 70 percent in electrical applications.



#### **Energy and Emissions Management**

Within Freeport Minerals Corporation<sup>1</sup> (FMC), we generally operate very large, low-grade copper deposits. These open-pit operations require significant energy, principally diesel, electricity and natural gas, most of which are obtained from third parties under long-term contracts. Energy represented approximately 20 percent of our copper mine operating costs in 2018. This is why our assetlevel objectives include a sharp focus on minimizing operating costs. Truck haulage is a major contributor to both cost and direct greenhouse gas (GHG) emissions.

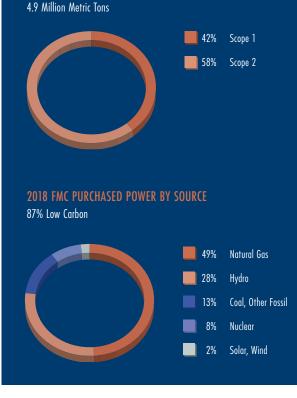
As our open pits continue to mature, haul road length increases, and trucks are required to move ore farther distances to processing facilities. In 2018, we increased mining rates, which included reactivation of significant

truck haulage capacity. In doing so, we continued to use real-time systems coupled with big data analytics to enhance predictive maintenance and operational performance to enable achievement of the highest availability and utilization of our haul trucks. A global benchmark of this metric continues to indicate that FMC achieves operational efficiencies 10 percent greater than our average mining company peer. Maintaining top-quartile equipment utilization supports our low cost profile with the benefit of emissions avoidance associated with inefficient asset use.

<sup>1</sup> Includes Bagdad, Chino/Cobre, Morenci, Safford, Sierrita, Tyrone and the Miami smelter in North America as well as Cerro Verde and El Abra in South America.



## 2018 FMC TOTAL (SCOPE I AND II) CARBON DIOXIDE EQUIVALENT EMISSIONS



FMC's total GHG emissions in 2018 were 4.9 million metric tons compared to 5 million metric tons the year prior. Direct, or Scope I, emissions increased approximately 300,000 metric tons, primarily driven by fuel consumption associated with higher mining rates and stripping activity at the Lone Star project (accounted by Safford).

In 2018, FMC's purchased power from renewable and low carbon sources increased to 87% from 80% the year prior. Thirty percent of the purchased power was solely generated from renewable sources. As sufficient information has become accessible for determining the sources of our purchased power at most operations, we have transitioned to a marketbased methodology for indirect, or Scope II, emissions accounting. Scope II emissions decreased approximately 300,000 metric tons

from the prior year while consumption of purchased power increased by approximately 4 percent. As the percentage of low carbon and renewable power in electric grids increases, we expect we can further reduce our Scope II emissions over time.

El Abra in Chile recently extended its energy supply contract that increases its consumption of renewable power, and by 2021, the operation expects 100 percent of its electrical power requirements will be sourced from renewables. Other operations participate in utility demand-side efficiency programs and support renewable energy standards when feasible, such as providing mining-related properties for solar power generation, including 20MW of solar generation in Arizona. Additionally, in late 2018, Freeport entered into a 14MW renewable purchase power agreement to source wind generation from Wyoming to mining operations in Arizona.

We do not currently operate in jurisdictions where existing mechanisms for carbon pricing signal a material increase to our costs. As countries implement programs to meet objectives of the COP 21 agreement (Nationally Determined Contributions), we may experience increased costs relating to changes in energy sources for, and GHG emissions from, our operations. In certain jurisdictions, however, we expect to enter into favorably priced power contracts with utilities as economic, renewable sources represent larger percentages of generation capacity.

In addition to related disclosures in this report, we have prepared a separate Climate Impacts and Opportunities report. The report, along with an independent verification statement of our 2018 greenhouse gas footprint, can be found on our website.

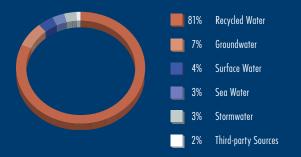
## WATER SUPPLY AND MANAGEMENT

We operate mines, smelters, processing facilities and reclamation projects around the world that require water for metal production or for site rehabilitation. Our mining operations are in areas where competition for water supplies is significant. We recognize that access to safe and clean water and sanitation is a fundamental human right and understand the critical importance of responsible water management.

Our operations utilized<sup>1</sup> approximately 1,540 million cubic meters of water during 2018, including water withdrawals<sup>2</sup> of approximately 300 million cubic meters. Eighty-one percent of our total utilized water was from recycled or reused sources. Our objective is to maintain high rates of recycled or reused water, and our performance has approximated 80 percent in recent years. We are implementing the ICMM Water Position Statement and applying its water reporting guidelines, which include a water use efficiency metric that takes into account our water discharged back to the environment at applicable operations. By accounting for discharge quantities of 96 million cubic meters, our water use efficiency was 86 percent for 2018.

Freeport-McMoRan maintains a global water management program designed to (1) increase water use efficiency in our processes and minimize the fresh water used by the operations; (2) maximize the reuse of water introduced to our operations; (3) replace traditional water supplies with renewable or recycled water supplies; and (4) collaborate with catchment stakeholders including local communities. The process begins with applying operational-based water models to understand our water use in order to minimize water losses (such as evaporation or seepage), maintain quality standards and identify opportunities for reuse. This allows us to seek a reduction in water needs where operational efficiencies allow, depending on production requirements. In addition to optimizing water use at our mining facilities, our water management practices are aligned with strategic objectives designed to maintain the safe operation and structural stability of our tailings storage facilities.

2018 TOTAL UTILIZED WATER 1,543 Million Cubic Meters





Collaboration with local stakeholders on projects to improve water quality and availability is core to our social investment priorities. Cerro Verde led a multi-stakeholder partnership to provide clean drinking water and a wastewater collection and treatment program that benefits more than 1 million people in the Arequipa region of Peru.

Minimizing our reliance on makeup water for operations is only one part of our water management program. To achieve a reduced water footprint within multi-user catchments, we continuously analyze the sources of our water and actively seek renewable and recycled sources. We have made progress in achieving this management objective, including:

- Replacing 50 percent of the makeup water needs at Cerro Verde with treated effluent from a wastewater treatment plant in Arequipa, Peru.
- Securing long-term and annual allocations of Colorado River water, considered a renewable source in Arizona. where the company operates in an arid climate. This effort is focused on obtaining both short-term and long-term water supply contracts with multiple Native American tribes who have senior water rights in the state. These agreements reduce our reliance on local groundwater and surface water and help Arizona accomplish its goal of moving industrial water users away from groundwater sources. The company is also partnering with other key business and governmental entities to develop water exchanges and additional water pipelines that will assist in the flexibility to utilize newly acquired alternative water sources such as treated effluent. In 2018, the company was able to offset 70 percent of its freshwater needs in Arizona through recharging Colorado River water in areas of the state where water is needed.
- Evaluating a large-scale expansion at El Abra in the Chilean Atacama Desert, where rainfall averages less than an inch per year to process additional sulfide material and to achieve higher recoveries. The project would likely include construction of a desalination plant and

<sup>&</sup>lt;sup>1</sup> Total Utilized Water = withdrawals + recycled + reused

<sup>&</sup>lt;sup>2</sup> Withdrawals or Makeup Water = surface water + groundwater + stormwater + sea water + third-party supply (such as municipal waste water effluent)



accompanying 90-mile pipeline. Technical and economic studies are being advanced to determine the optimal scope and timing for the project.

- Serving as a leading member of an international coalition conducting studies to bring desalinated water to the southwest U.S. and working with another international coalition that would work to capture raw sewage to convert it into usable water.
- Evaluating a proposal for a joint water storage project to capture runoff in the Rocky Mountain region that would support existing mine water supplies and development of new supplies for local communities.

Preventing on-site and off-site impacts to water resources also is core to our water management system. Stormwater is actively managed and contained on-site for operational use by utilizing various piping systems, sumps, containment structures and dams. We are reviewing the potential for more frequent and intense precipitation events that could result in impacts to on-site and off-site water resources. During such events, it is critical to route on-site water from areas in danger of overflowing to areas with adequate storage capacity.

At the operating level, each active mining and metals processing facility evaluates climate-related risks and opportunities through its sustainable development risk register process. This includes reviewing the potential for physical climate risks, including impacts from intense weather events that could jeopardize the resiliency of revenue generating operations.



The majority of our recycled water originates from reclaimed water captured at tailings facilities and leach pads. Above, water on the Morenci tailing impoundment is set to be recycled.



Above is the tailing distribution pipeline platform and jacking header along the centerline of Bagdad's Upper Mammoth TSF. The platform supports 85 on-dam cyclones used to separate the material into coarse and finer fractions, where the coarse fraction is used to build a free draining embankment for the tailings storage facility.

## TAILINGS MANAGEMENT AND STEWARDSHIP

Affiliates of our company currently operate 18 tailings storage facilities (TSFs), 16 in the U.S. and two in Peru, and manage 59 in the U.S. that are inactive or reclaimed. Our inventory of TSFs comprises 13 active and 53 inactive or reclaimed facilities with an upstream design, five active and five inactive with a centerline design, and one reclaimed facility with a downstream design. After a detailed review of corporate records, we have recently increased the number of reported facilities to account for legacy operations that were reclaimed several decades ago.

We recognize that the failure of tailings and other impoundments at any of our mining operations could cause severe – and in some cases catastrophic – property and environmental damage and loss of life. Many of our tailings impoundments are located in areas where a failure has the potential to impact individual dwellings, and a limited number of impoundments are in areas where a failure has the potential to impact nearby communities or mining infrastructure. As a result, our programs take into account the significant consequences resulting from a potential failure, and we apply substantial financial resources and technical resources, both internal and external, to materially reduce the likelihood of failures.

Our Tailings Management and Stewardship Program launched in 2004 and has evolved significantly over the last 15 years. Today, through the Program, we employ substantial engineering expertise, technological monitoring, and local and corporate management oversight to validate these facilities are designed, built, operated and monitored to minimize risk to employees, neighboring communities and the environment. These safeguards generally fall within four categories: (1) engineering and design; (2) rigorous adherence to construction and operational parameters through monitoring; (3) multi-tiered oversight; and (4) adherence to practices grounded in continuous improvement and learning from past experiences, including industry failures. We also implement the core elements from International Council on Mining and Metals Position Statement on Preventing Catastrophic Failure of Tailings Storage Facilities published in December 2016: accountability, responsibility and competency; planning and resourcing; risk management; change management; emergency preparedness and response; and review and assurance.

We have a strong commitment from our Board of Directors and executive management team to provide the necessary resources to protect safety. While we believe our Tailings Management and Stewardship Program is robust and mitigates risks, we continue to identify opportunities for continuous improvement in all aspects of our Program. Our corporate culture is to communicate critical information upward so that important matters are identified, evaluated and acted upon.

#### **Multi-Tiered Oversight**

Our tailings stewardship team, comprising third-party engineers and internal experts, physically inspects all of our tailings facilities, reviews associated documents and monitoring data to identify potentially significant deficiencies, and recommends corrective actions. In addition, we have commissioned Technical Review Boards (generally four-person panels comprising internationally known experts, typically PhDs with more than 30 years of experience in their respective areas of specialization). These boards provide independent opinions and guidance on the physical integrity, safety and performance of our tailings storage facilities and associated management systems. Each Technical Review Board for operating sites has direct access to the Chief Operating Officer and direct access to the Vice President-Environmental Services and Sustainable Development for inactive/legacy sites, and each member has a responsibility to report any concerns not being adequately addressed by line management.

Our tailings stewardship team has inspected all active tailings storage facilities within the past 12 months and has visited almost all facilities within the past three years. Members of our Technical Review Boards (TRBs) visit our active and select inactive tailings storage facilities at least every four years and meet with our internal teams and Engineers of Record (EoRs) periodically to review our followup activities to their previous recommendations. We track recommended actions from inception to completion.

#### **Remediating Findings/Improving Practices**

Since the Mount Polley tailings dam failure in 2014 and the Samarco tailings dam failure in 2015, our TRBs have recommended that our sites and EoRs investigate and identify site conditions that could create a potential failure. The company then deploys resources to remediate findings. For example, in 2018, we acted on the recommendations of TRBs and, out of an abundance of caution, we initiated construction on tailings dam buttress projects at both Sierrita and Henderson.

#### **Recent Program Enhancements**

During 2018, we have:

- Completed our Tailings Management System Guide umbrella document that ties together our numerous tailings management and stewardship programs and procedures, documentation, and personnel roles and responsibilities.
- Continued development of the risk-informed decisionmaking process and screening design criteria and completed a gap analysis on available information for all TSFs, particularly for inactive and closed TSFs that were previously considered lower priority.
- Completed an emergency action plan tabletop exercise with internal technical and crisis management personnel for one site and established plans for three additional sites' tabletops in 2019.
- Continued to enhance surveillance and monitoring tools such as developing a mobile data acquisition system tool for field inspections and other key performance indicator data collection activities.
- Continued to improve interpretation and utilization of InSAR data as well as enhance audits of our automated instrument data acquisition, visualization and alarming system.
- Continued to improve water balance modeling by incorporating updated regional extreme precipitation studies, analyzing evaporation rate data from various remote sensing techniques and incorporating methods to better quantify uncertainty in the models.



Active TSFs are continually monitored for embankment dam structural stability and environmental aspects such as dust generation potential. Above, buttress construction provides additional stability at the Sierrita TSF near Green Valley, Arizona.



We reclaim inactive TSFs by regrading slopes, conveying and diverting storm water, capping with soil cover, and reseeding with native grasses and shrubs. Above are Tyrone TSFs in New Mexico after completing reclamation.

 Delivered three weeks of high quality technical training courses and workshops for tailings engineers on geotechnical design of levees, tailings deposition modeling, tailings material characterization and laboratory visits, critical state soil mechanics, good practice examples for site engineer functions, and automated data acquisition system maintenance. There was regular information sharing between corporate and site tailings engineers on good practices and implementation of new initiatives.

#### **Controlled Riverine Tailings Management**

PTFI's controlled riverine tailings management system is implemented based on methods approved and permitted by the Government of Indonesia. The site-specific system, chosen after extensive evaluations of over a dozen alternatives, uses an unnavigable river to transport tailings out of the highlands (from approximately 3,000 meters elevation) to an engineered deposition area in the lowlands referred to as the ModADA. The river is not used for potable water, agriculture, fishing or other domestic or commercial uses, nor was it used for these purposes before operations began. Levees have been and continue to be constructed to laterally contain the footprint of the tailings and natural sediment within the ModADA while quantities of finer tailings and other sediments deposit in the estuary and the sea. Independent, environmental management expert audits have reaffirmed the controlled riverine tailings management system is the best site-specific management alternative considering the topographical, seismic and geotechnical, geological, climatological and environmental conditions of the project area. If any conventional tailings system had been selected and implemented, it likely would have structurally failed by now.

In addition to internal and external audits and assessments, PTFI uses the ModADA Management Board (MMB) for oversight of the tailings system. The MMB is a multidisciplinary expert panel that meets on site to assess system performance and risks associated with the ModADA and coastal zone area. The MMB focuses on the structural integrity of the levees and the geochemical stability of the deposition area as well as associated stakeholder engagement. The MMB provides recommendations to PTFI leadership and engineering teams on priority activities and tracks progress on detailed recommendations.

PTFI's environmental impacts are well documented, monitored and managed and have been subject to the Government of Indonesia's regulatory oversight, including the approval of the AMDAL for PTFI operations and the approval of annual work plans. Impacts of the system, including increases in sedimentation, were predicted in numerous studies and are consistent with the design and operation of the chosen alternative. Monitoring programs have established, except for elevation changes, the environmental impacts of tailings deposition are reversible at the end of mine life.

Data from biological sampling continues to demonstrate that the estuaries downstream of the tailings deposition area are functioning ecosystems, based on both the number of species and the number of specimens collected of nektonic, or freeswimming, organisms such as fish and shrimp. Large-scale demonstration reclamation projects show that several land use options are possible after final closure of the deposition area. When mining is completed, this area can be reclaimed with natural vegetation or used for agriculture, forestry, grazing of livestock and aquaculture among other options, depending on stakeholder ambitions.



Large-scale demonstration projects confirm that multiple land use options are viable after final closure of the PTFI tailings deposition area. The area can be reclaimed with natural vegetation or used for agriculture, forestry, livestock grazing and aquaculture.

## BIODIVERSITY

We are committed to minimizing the impacts of our operations on biodiversity and ecosystem services while promoting opportunities to conserve and enhance resources in the areas in which we operate.

Biodiversity considerations are integrated into our EMS, which enable us to understand potential impacts of our operations, to minimize adverse impacts to the maximum extent practicable and to seek opportunities to promote conservation outcomes throughout all phases of a project. As a member of the ICMM, we are addressing the commitments within its Mining and Protected Areas Position Statement, including not mining or exploring in World Heritage sites. We are also developing guidance for our sites to address the ICMM Performance Expectation regarding implementation of the mitigation hierarchy with the ambition of no net loss.

Our commitment to biodiversity conservation is further supported by the implementation of wildlife protection plans at North American operations. These plans present biodiversity baseline conditions, assess potential wildlife risks associated with our operations and identify protection measures. They also incorporate an adaptive management approach to promote continual improvement in wildlife protection and allow us to effectively address new risks arising from operational and ecological changes. Based upon the results of the wildlife risk assessment processes, several operations have also adopted avian protection plans to minimize potential risks to migratory birds. At international operations, we apply similar biodiversity action plans to address risks to important species while promoting conservation opportunities.

In 2018, we continued long-term programs to promote the conservation of imperiled species. Examples include:

- Tyrone, Morenci and Miami operations implemented management plans developed in consultation with the U.S. Fish and Wildlife Service to support conservation of several endangered species such as the spikedace, loach minnow, yellow-billed cuckoo and southwestern willow flycatcher.
- Henderson operations continued its partnership with Colorado Parks and Wildlife to support boreal toad conservation and documented successful reproduction on mine property for the third consecutive year.
- Sierrita operations voluntarily relocated over 200 endangered Pima pineapple cactus from the mine site to a company-owned property that is protected under a conservation easement.
- Morenci operations supported Arizona Department of Game and Fish efforts to establish new bighorn sheep populations by capturing bighorn sheep from the mine site and relocating them to new habitats.



Morenci partnered with multiple stakeholders to install a bat-friendly gate at the Eagle Creek bat cave. Since its installment in 2010, the resident Mexican free-tailed bat population has grown from approximately 30,000 to 1.5 million individuals.

- Cerro Verde operations continued conservation programs for several species such as the endangered guanaco and Peruvian long-snouted bat.
- El Abra operations conducted programs benefiting regionally endemic vegetation and wildlife at the Salar de Ascotán wetlands area.

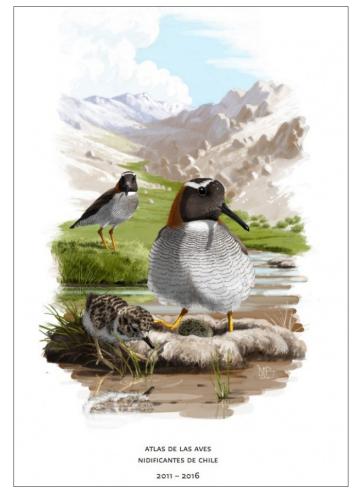
Due to its location in one of the world's richest biodiversity regions, the PTFI project area contains considerable biodiversity. PTFI conducts ongoing biodiversity inventories to inform its biodiversity management program, including approaches for in situ conservation of biodiversity; the longterm monitoring of mine related impacts on biodiversity; and the rehabilitation and restoration of disturbed areas using principles of restoration ecology. Through its Biodiversity Action Plans, PTFI aims to (1) recognize the important role that biodiversity plays in sustainable development, (2) establish a



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Freeport-McMoRan's Pollinator Conservation Initiative creates habitats vital to global ecosystems. Today, 14 operations are implementing pollinator conservation projects in collaboration with local stakeholders.





The first comprehensive Atlas of Nesting Birds of Chile was facilitated by El Abra and ROC (Red de Observadores de aves y vida Silvestre de Chile), a non-profit network of bird observers. The three-year project involved 1,800 volunteer bird watchers who spotted over 330 species.

strong partnership with multiple stakeholder groups involved in conservation and natural resource management, including local governments and citizens, (3) effectively manage local biodiversity for the region, and (4) provide biodiversity education, research and information opportunities.

Flora and fauna from Papua often become the object of illegal trade. Countering illegal wildlife trade is a priority for Papua's natural resource agencies and part of PTFI's commitment to biodiversity conservation in Papua. PTFI cooperates with the Indonesia Animal Rescue Center, Forest Protection & Nature Conservation, Forestry Department, Lorentz National Park Center and Wasur National Park Center to repatriate protected animals to their habitats. Please see our website for more details on PTFI's expansive biodiversity programs.

While our biodiversity projects vary in scope and size, each provides an opportunity to benefit ecosystems and the communities where we operate. Most biodiversity projects involve productive collaborations with stakeholders such as government agencies and NGOs, and many incorporate formal outreach and STEM education opportunities. For example, staff across our North American sites reached over 2,000 students and community members through pollinatorfocused education and outreach activities including Earth Day celebrations, pollinator education workshops and handson planting events in the field. In partnership with Bat Conservation International, Wildlife Habitat Council (WHC) and other NGOs, we participated in an initiative to protect migratory, nectar-feeding bat species near its operations in southeastern Arizona. During 2018, company staff engaged over 120 employee and community volunteers to propagate and plant native agave species that serve as the bats' primary food source. The Arizona Mining Association recognized Morenci's long-standing commitment and extensive efforts around bat conservation by awarding it the 2018 Sustainability, Preservation and Diversity in the Environment award.

Freeport-McMoRan participates in the WHC certification program, which formally recognizes meaningful biodiversity conservation and environmental education and community outreach programs. In 2018, both Chino and Sierrita became WHC certified bringing our total certifications to 18 operating sites and company facilities. Fifteen sites received gold-tier certification, and three received silver-tier certification through the WHC Conservation Certification process. In 2018, Henderson won WHC's Invasive Species Management Award for its efforts to remove invasive species and enhanced native habitat while Morenci received the Mammals Project Award for its Rocky Mountain bighorn sheep management activities.



PTFI has constructed multiple environmental education facilities within its tailings reclamation and demonstration area, including a large butterfly sanctuary. Multiple important species are nurtured and protected from predators before their release into the surrounding habitats of the lowlands.

## **2018 WINNING BIODIVERSITY PHOTOS**

Since 2011, Freeport-McMoRan employees have participated in the company's annual biodiversity photo contest. Each year approximately 400 photos are submitted by employees, and the contest successfully engages our workforce on biodiversity appreciation and promotes habitats at our worldwide operations. Winning photos from the popular contest are featured in the Wildlife Habitat Council's Corporate Homes for Wildlife calendar, which is distributed internationally. The calendar showcases efforts by member companies to enhance and conserve wildlife habitat on corporate lands. Winning photos selected by the company's Biodiversity Task Force are presented on this page.

2018 Biodiversity Photo Contest Co-Winner: Mountain Goat by Chris Schmitz, Chief Mine Engineer-Climax Pictured: A mountain goat attracted by salt on a hillside at Climax operations with Mount Arkansas in the background.

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2018 Biodiversity Photo Contest Co-Winner: Bobbie by Jeff Ladderud, Research Engineer – Oro Valley Office Pictured: A bobcat in the wash near the Oro Valley offices in Arizona.







## 2018 RUNNERS-UP **BIODIVERSITY PHOTOS**

- (left to right) Red-collared Myzomela (PTFI)
- Black-chinned Hummingbird (Bagdad)
- Gila Monster (Bagdad)
- Red Kite (Atlantic Copper)
- Buff-banded Rail (PTFI)
- Common Porcupine (Morenci)
- Andean Fox (El Abra)

- Common Green Birdwing (PTFI)
  Rocky Mountain Elk (Climax)
  Dark Sheath-tailed Bats (PTFI)
- Greater Flamingo (Atlantic Copper)













TREND DATA

	2014	2015	2016	2017	2018
WORKFORCE					
Employees	35,000	34,500	30,000	25,200	26,800
Contractors	46,300	37,500	29,100	28,000	38,800
Percent Employees Under Collective Bargaining Agreemer	nts 48%	48%	47%	39%	37%
HEALTH AND SAFETY					
Workforce Fatalities	7	3	6	5	о
Total Recordable Incident Rate <sup>®</sup>	0.56	0.56	0.64	0.76	0.71
Occupational Illness Cases	46	43	26	38	42
ENVIRONMENT					
Direct Greenhouse Gas Emissions (million metric tons)	5.2	6.0	5.5	4.5	5.2
Indirect Greenhouse Gas Emissions (million metric tons)	4.3	4.6	4.9	3.6	3.2
Total Utilized Water (million cubic meters)	1,326	1,459	1,738	1,560	1,543
Percent Recycled Water	79%	80%	81%	82%	81%
Reportable spills or releases of hazardous or toxic chemicals	14	13	23	11 <sup>b</sup>	15 <sup>b</sup>
Notices of Violations related to permit exceedances, spills, releases or other compliance matters	11	2	5	0	13
Environmental Penalties (\$ thousands)	\$ 124	\$ 43	\$0	\$ 317°	\$ O
SOCIAL					
Community Investments (\$ millions)	\$ 198	\$ 165	\$ 142	\$ 153	\$ 155
Cash Payments to Governments <sup>d</sup> (\$ millions)	\$ 3,355	\$ 1,993	\$ 1,428	\$ 1,346	\$ 2,409
Direct Economic Contributions <sup>d</sup> (\$ millions)	\$ 17,030	\$ 14,475	\$ 13,414	\$ 12,158	\$14,663

a. TRIR = [(Fatalities + Lost Time Incidents + Restricted Duty Incidents + Medical Treatment) x 200,000] / Total Hours Worked.

b. Excludes PTFI where approximately 35 reportable spills occurred in 2017 and 70 in 2018, including a high percentage from pipeline sabotage.

c. Penalties paid were from NOVs at Cerro Verde in 2006 and 2008.

d. Please see detailed information in our WTSD reports published on fcx.com/sustainabililty.

Note: As a result of methodology changes or corrections, prior year data may be updated. Data presentation and comparisons may not meet the direct needs of all stakeholders, and we encourage users of this information to contact our Sustainable Development Department at sustainability@fmi.com with inquiries.



The Freeport-McMoRan Inc. (Freeport-McMoRan) 2018 Working Toward Sustainable Development (WTSD) report, including information referenced by the Global Reporting Initiative (GRI) Sustainability Reporting Standards published on the Freeport-McMoRan web site, has been prepared by the management of Freeport-McMoRan who are responsible for the collection and presentation of this information.

## SCOPE

Corporate Integrity Ltd., in accordance with Freeport-McMoRan management's instructions, was asked to perform:

- 1. A review of policies and systems in place in relation to the International Council on Mining & Metals (ICMM) Sustainable Development (SD) Framework – using as a basis the ICMM Sustainable Development Framework: Assurance Procedure and the core option of the GRI Sustainability Reporting Standards.
- 2. A review of statements made in the 2018 WTSD report and information referenced by the GRI Content Index.

Our assurance work covered Subject Matters 1 to 5 referred to in the ICMM SD Framework: Assurance Procedure.

Our assurance work scope covered all the Freeport-McMoRan mining and metals processing operations defined by the reporting boundaries of the 2018 WTSD report.

The work involved selective reviews of documents, interviews and site visits to:

- Cerro Verde Mine, Peru;
- El Abra Mine, Chile;
- Atlantic Copper Refinery, Spain;
- PT Freeport Indonesia (PTFI)- Grasberg Mine, Indonesia;
- Morenci Mine, USA
- Safford Mine, USA
- Sierrita Mine, USA; and
- Head Office, Phoenix, USA.

The review also involved a desktop review and telephone interview with management of:

- Stowmarket Chemical Conversion Plant, UK;
- Rotterdam Chemical Conversion Plant, Netherlands;
- Bayway Copper Product Manufacturing Plant, USA;
- Norwich Copper Rod Plant, USA

Freeport-McMoRan's site visit programme is part of an ongoing process to conduct this assurance scope of work at all major Freeport-McMoRan mining and processing sites at least one time every three years. The programme includes annual site-level assurance at Cerro Verde and PTFI.

## **KEY FINDINGS**

Based on our review, its scope and limitations:

- Nothing has come to our attention, which causes us to believe that the information reported by Freeport-McMoRan in the 2018 WTSD Report and information referenced by the GRI Content Index regarding Freeport-McMoRan implementation of the ICMM assurance commitment with respect to subject matters 1 to 4, has been materially misstated.
- Nothing has come to our attention to cause us to believe that the Freeport-McMoRan is not reporting in accordance with the GRI Standards: Core option.

## METHODOLOGY

Through document reviews and interviews at the selected sites and head office, the work activity involved:

## FOR SUBJECT MATTERS 1 TO 3 IN THE ICMM SD FRAMEWORK: ASSURANCE PROCEDURE

- 1. A review of Freeport-McMoRan policies and their alignment to ICMM's 10 SD principles and ICMM Position Statements at corporate and site level.
- 2. A review of processes in place to identify and prioritise SD risks and opportunities at corporate and site level during the reporting period and the results of the identification and prioritization process.
- 3. A review of the systems and approaches that Freeport-McMoRan is using to manage its identified material SD risks and opportunities and to implement ICMM's 10 SD principles at corporate and site level.

## FOR SUBJECT MATTERS 4 AND 5 IN THE ICMM SD FRAMEWORK: ASSURANCE PROCEDURE

- 4. Review of Standard Operating Procedures (SOPs) for the collection and assimilation of GRI reported performance information involving:
  - a. An assessment to evaluate the risk of misstating reported information for quantitative topic-specific disclosures reported. The assessment looked at site-level reported performance data for GRI topic-specific disclosures and considered materiality in the context of corporate level reported information. On this basis, certain topic-specific disclosures were selected for verification activities at the selected sites. The assessment methodology was based on ISO 31000:2009, Risk management Principles and Guidelines.
  - b. A review of data reporting, collection and consolidation processes at Head Office.
- 5. Review of statements made in the 2018 WTSD report and information referenced by the GRI Content Index regarding Freeport-McMoRan sustainable development processes and achievements in 2018 including its implementation of the ICMM SD Framework. This involved VP-level and Executive Officer-level management interviews, including interviews with the CEO, CFO, COO and CAO and with members of the company's Sustainable Development Leadership Team. This also involved documentation reviews in support of corporate-level reported information.
- 6. Review and selective testing for accuracy of qualitative statements made in the 2018 WTSD report and information referenced by the GRI Content Index.
- 7. Assessment of Freeport-McMoRan's claim to be reporting in accordance with the GRI Standards: Core option.

## LIMITATIONS OF THE WORK PERFORMED

This work has been carried out by checking samples of information and documents that have been made available during the period of assurance activity by Freeport-McMoRan.

Information provided that has been deemed to be independently verified by other third parties has been considered to be appropriately verified, and was not subjected to re-verification by Corporate Integrity Ltd.

Our evidence gathering procedures have been designed to obtain a limited level of assurance on which to base our conclusions.

The assurance statement provided by Corporate Integrity Ltd. is not intended to be used as advice or as the basis for any decisions, including, without limitation, financial or investment decisions.

## **STATEMENT OF INDEPENDENCE**

The independence of our team has been reviewed and none of the Corporate Integrity assessors involved in this project presents a conflict of interest to the integrity of this assurance statement.

## STANDARD APPLIED TO THIS ENGAGEMENT

International Standard on Assurance ISEA3000 (revised) – Assurance Engagements other than Audits & Reviews of Historical Financial Information' issued by the International Auditing and Assurance Standards Board (IAASB).



333 North Central Avenue Phoenix, Arizona 85004 602.366.8100 fcx.com