

# Annual Information Form

Date: March 28, 2017

2016

For the Year Ended December 31, 2016

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#### PRELIMINARY NOTES

Unless the context indicates otherwise, a reference to the "Company" and "DPM" in this Annual Information Form ("AIF") means Dundee Precious Metals Inc. and its subsidiaries and other entities owned or controlled, directly or indirectly, by Dundee Precious Metals Inc.

# **Cautionary Note Regarding Forward Looking Information**

This AIF contains "forward looking statements" or "forward looking information" (collectively, "Forward Looking Statements") that involve a number of risks and uncertainties. Statements that constitute Forward Looking Statements include, but are not limited to, certain statements with respect to the estimated capital costs, operating costs and other project economics with respect to Krumovgrad, the timing of development, permitting, construction, and commissioning activities in respect of Krumovgrad and further optimization work at Tsumeb, the future price of gold, copper, silver and acid, toll rates, metals exposure and stockpile interest deductions; the estimation of Mineral Reserves and Mineral Resources; the realization of such mineral estimates; the timing and amount of estimated future production and output; Life of Mine ("LOM"); costs of production; cash costs and other cost measures; capital expenditures; costs and timing of the development of new deposits; results of economic studies; success of exploration activities; permitting time lines; currency fluctuations; requirements for additional capital; government regulation of mining and smelting operations; success of permitting activities; environmental risks; reclamation expenses; the potential or anticipated outcome of title disputes or claims; and timing and possible outcome of pending litigation. Forward Looking Statements are statements that are not historical facts and are generally, but not always, identified by the use of forward looking terminology such as "plans", "expects", or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "outlook", "intends", "anticipates", or "does not anticipate", or "believes", or variations of such words and phrases that state that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved. Forward Looking Statements are based on certain key assumptions and the opinions and estimates of management as of the date such statements are made, and they involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any other future results, performance or achievements expressed or implied by the Forward Looking Statements. In addition to factors already discussed in this document, such factors include, among others: the uncertainties with respect to actual results of current exploration activities; actual results of current reclamation activities; conclusions of economic evaluations and economic studies not being realized; changes in project parameters as plans continue to be refined; possible variations in ore grade or recovery rates; fluctuations in metal and acid prices, toll rates and foreign exchange rates; failure of plant, equipment or processes to operate as anticipated; accidents, labour disputes and other risks of the mining and smelter industries; delays in obtaining governmental approvals or financing or in the completion of development or construction activities; increase in costs of supplies, labour and fuel; uncertainties inherent with conducting business in foreign jurisdictions where corruption, civil unrest, political instability and uncertainties with the rule of law may impact the Company's activities; dependence on a restricted portfolio of assets; termination of certain contracts for the sale of pyrite concentrate and long-term tolling agreements; unanticipated title disputes, claims or litigation; limitation on insurance coverage; cyber-attacks; as well as those risk factors discussed or referred to in this AIF under the heading "Risk Factors" and other documents filed from time to time with the securities regulatory authorities in all provinces and territories of Canada and available at www.sedar.com. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in Forward Looking Statements, there may be other factors that cause actions, events or results not to be anticipated, estimated or intended. There can be no assurance that Forward Looking Statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Other than as it may be required by law, the Company undertakes no obligation to update Forward Looking Statements if circumstances or management's estimates or opinions should change. Accordingly, readers are cautioned not to place undue reliance on Forward Looking Statements.

#### **Non-GAAP Measures**

This AIF contains certain non-GAAP (as defined herein) measures such as expected cash cost per tonne/ounce/pound processed, sustaining capital expenditures and EBITDA (as defined herein). Such measures have non standardized meaning under International Financial Reporting Standards and may not be comparable to similar measures used by other issuers. See DPM's latest Management's Discussion and Analysis ("MD&A") for more information about non-GAAP measures reported by the Company.

# **Defined Terms and Abbreviations**

In addition to Appendix A, the following are defined terms and abbreviations that are used throughout this AIF:

"AMEC" AMEC Foster Wheeler plc, an international EPCM company.

"ASL" Above Sea Level.

"AuEq" Gold Equivalent.

"Board" The board of directors of Dundee Precious Metals Inc.

"Cdn" Canadian dollar.

"CoM" Council of Ministers.

"CSA" CSA Global (UK) LTD., a privately-owned consulting company.

"EBITDA" Earnings before interest, taxes, depreciation and amortization.

"EIA" Environmental Impact Assessment.

"EPCM" Engineering Procurement and Construction Management.

"FAusIMM"; "MAusIMM" Fellow Australian Institute of Mining and Metallurgy; Member Australian Institute of

Mining and Metallurgy

"GAAP" Generally accepted accounting principles.

"Golder" Golder Associates Ltd.

"Lenders" BNP Paribas, Canadian Imperial Bank of Commerce, European Bank for Reconstruction

and Development, Export Development Corporation (effective 2014), Raiffeisen Bank

International AG, Royal Bank of Canada and Unicredit Bank AG.

"Minister" Namibian Minister of Environment and Tourism.

"MoE" Ministry of Economy.

"MoEET" Bulgarian Ministry of Economy, Energy and Tourism, subsequently renamed and

converted into other entities.

"MoEW" Bulgarian Ministry of the Environment and Waters.

"Mt"; "Mtpa"; "tpa"; "tpd";

"tph"

Million tonnes; Million tonnes per year; tonnes per year; tonnes per day; and tonnes

per hour.

"NI 43-101" National Instrument 43-101, Standards of Disclosure for Mineral Projects.

"NI 51-102" National Instrument 51-102, Continuous Disclosure Obligations.

"NI 52-109" National Instrument 52-109, Certification of Disclosure in the Company's Annual and

Interim Filings.

"NSR" Net smelter return.

"QAQC" Quality Assurance and Quality Control data.

"QP" A Qualified Person under NI 43-101.

"RC" Reverse Circulation.

"RSG" RSG Global Pty Ltd. Effective September 2006, RSG was acquired by Coffey International

limited and integrated with Coffey Mining Pty Ltd.

"SEDAR" System for Electronic Document Analysis and Retrieval.

"SGS" SGS Laboratories.

"SO<sub>2</sub>" Sulphur dioxide.

"USD" United States Dollar.

#### Conversion

The following table sets forth the factors for converting imperial measurements into metric equivalents:

| To convert from Imperial | To Metric  | Multiply by: |
|--------------------------|------------|--------------|
| Acres                    | Hectares   | 0.404686     |
| Feet                     | Metres     | 0.304800     |
| Miles                    | Kilometres | 1.609344     |
| Tons                     | Tonnes     | 0.907185     |
| Ounce (troy)             | Grams      | 31.103477    |

#### **Currency Conversion**

All dollar amounts referred to herein are in USD unless stated otherwise.

#### **Date of Information**

All information contained in this AIF is as of December 31, 2016, the last day of the Company's most recently completed financial year, unless otherwise indicated.

#### **Mineral Resource and Mineral Reserve Estimates**

Unless otherwise stated, all Mineral Resource and Mineral Reserve estimates contained in this document are calculated in accordance with NI 43-101 of the Canadian Securities Administrators and the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Standards on Mineral Resources and Reserves Definitions and Guidelines ("CIM Standards") dated May 10, 2014. This AIF uses the terms "Measured", "Indicated" and "Inferred" Mineral Resources. United States investors are advised that while such terms are recognized and required by Canadian regulations, the U.S. Securities and Exchange Commission does not recognize them. "Inferred Mineral Resources" have a great amount of uncertainty as to their existence and as to their economic and legal feasibility. It cannot be assumed that all or any part of an Inferred Mineral Resource will ever be upgraded to a higher category. Under Canadian rules, estimates of Inferred Mineral Resources may not form the basis of feasibility or pre-feasibility studies. United States investors are cautioned not to assume that all or any part of Measured or Indicated Mineral Resources will ever be converted into Mineral Reserves. United States investors are also cautioned not to assume that all or any part of an Inferred Mineral Resource exists, or is economically or legally mineable.

#### **Technical Information**

Unless otherwise stated, the technical or scientific information in this AIF has been prepared in accordance with Canadian regulatory requirements set out in NI 43-101. Refer to "Names and Interests of Experts" for further details.

All quoted Mineral Reserves and Resources have also been reviewed and approved by DPM's Technical Consultants, CSA. See also "Names and Interests of Experts" for information with respect to QPs who have reviewed, supervised the preparation of, or prepared technical or scientific information.

"Chelopech 2016 Technical Report"

A technical report entitled "NI 43-101 Technical Report - Mineral Reserve Update, Chelopech Project, Chelopech, Bulgaria" dated March 28, 2016, and filed on SEDAR on March 28, 2016, prepared by Malcolm Titley, MAusIMM, MAIG, Karl van Olden, BSc (Eng), GDE, MBA, FAusIMM, Simon Meik, BSc (Hons), PhD, FAusIMM, Ross Overall, BSc (Hons) CSci, MIMMM, FGS and Petya Kuzmanova, MIMMM, CSci, each of whom are QPs under NI 43-101, with the exception of Ms. Kuzmanova, and Messrs. Titley and Bennet being independent of DPM.

"Krumovgrad 2014 Technical Report"

A technical report entitled "NI 43-101 Technical Report – Ada Tepe Deposit, Krumovgrad Gold Project, Bulgaria" dated March 21, 2014, and filed on SEDAR on March 28, 2014, prepared by Galen White, BSc (Hons) FAusIMM FGS, Julian Bennett, BSc ARSM FIMMM CEng, Simon Meik, BSc (Hons), PhD, FAusIMM, and Peter Corrigan BAI, CEng, each of whom are QPs under NI 43-101, and Messrs. White, Bennett and Corrigan being independent of DPM.

#### **CORPORATE STRUCTURE**

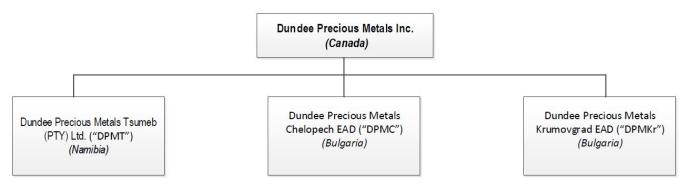
Dundee Precious Metals Inc. was amalgamated under the Canada Business Corporations Act (the "CBCA") by articles of amalgamation dated September 2, 1983. The Company's name was changed by articles of amendment on June 9, 1999. The investment restrictions set forth in Schedule "B" of the articles of the Company were amended on August 13, 1997 and November 10, 2000, and subsequently removed in their entirety on April 16, 2004, pursuant to articles of amendment upon the Company's conversion from a closed-end precious metals investment company to an operating mining company (the "Conversion").

As part of the Conversion, the Company completed a capital reorganization and eliminated its dual class structure. The Company amended its articles on April 16, 2004 which resulted in: (a) the reclassification of the 3,000 outstanding common shares in the capital of the Company as class A shares in the capital of the Company (the "Class A Shares"); (b) the subdivision of each issued and outstanding Class A Share (including the 3,000 outstanding common shares in the capital of the Company reclassified as Class A Shares) into five (5) Class A Shares; (c) the cancellation of the existing class of common shares in the capital of the Company; (d) the reclassification of all of the unissued and all of the issued and outstanding Class A Shares as a new class of common shares in the capital of the Company (the "Common Shares"); and (e) the creation of an unlimited number of preference shares in the capital of the Company (the "Preference Shares") issuable in series. A summary of the attributes of the Common Shares and the Preference Shares is provided herein under the heading "Description of Capital Structure".

The Company amended its articles on May 18, 2010, to allow directors to appoint directors within the minimum and the maximum number permitted by the Company's articles. It also amended its by-laws in February 2014 to adopt advance notice requirements for the nomination of directors at its shareholders' meetings.

The head and registered office of the Company is 1 Adelaide Street East, Ste. 500, Toronto, Ontario, M5C 2V9.

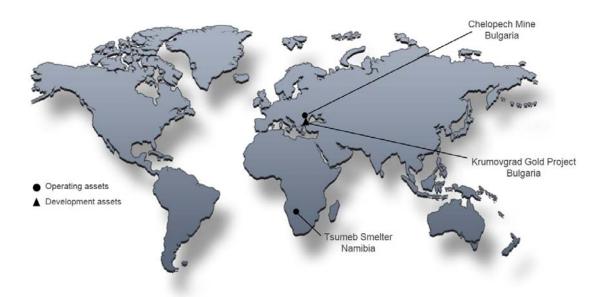
The following chart illustrates the Company's material subsidiaries (the "Subsidiaries") and the jurisdiction of incorporation of each company as of the date hereof. All Subsidiaries are 100% owned by DPM<sup>1</sup>.



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<sup>(1)</sup> The Subsidiaries are held through the following 100% owned holding entities: Dundee Precious Curaçao GP B.V., Dundee Precious Curaçao LP B.V., DPM (Dutch) C.V. (Netherlands) Partnership, Dundee Precious Metals Cooperatief U.A.; in the case of DPMT, by Dundee Precious Investments B.V.; in the case of DPMC, by Dundee Precious (Chelopech) B.V.; and in the case of DPMKr, by Dundee Precious (Krumovgrad) B.V.

The following map illustrates the location of the Subsidiaries' operating and development assets.



# **GENERAL DEVELOPMENT OF THE BUSINESS**

# **Three Year History**

Significant developments in the Company's business during the three most recently completed financial years are summarized below. Additional information for the financial year ended December 31, 2016, along with guidance and information with respect to the Company's plans for 2017, are contained in the MD&A for the financial year ended December 31, 2016.

# **Recent Developments**

#### 2017 Year to Date

• On January 24, DPM completed a \$33.2 million (Cdn\$43.7 million) strategic equity investment with the European Bank for Reconstruction and Development ("EBRD"). See "Material Contracts" for further details.

# 2016

- In December, DPM announced the discovery of Zone 153, a new zone of high grade copper and gold mineralization
  at its Chelopech mine in Bulgaria. See "Operating Mines Chelopech Mine, Chelopech, Bulgaria Resource
  Development" for further details.
- Impairment charges of \$118.7 million in respect of DPMT were recognized in 2016, of which \$107.0 million related primarily to lower forecast third party toll rates and reduced volumes related to a slower ramp-up of the smelter to 370,000 tpa and \$11.2 million related to a write-down of DPMT's arsenic plant, reflecting management's third quarter decision to discontinue production of arsenic trioxide.
- Following receipt of the final construction permit for the Krumovgrad Gold Project in August, fourth quarter
  activities on the project site focused on completion of the early works program, including the temporary access road
  to the site and tree clearing in the process plant area, to support commencement of earthworks, mobilization and
  set up of the project team at site, ordering of long lead grinding mills, commencement of earthworks activities and
  successful execution of first blast at site.
- In September, DPM entered into a prepaid forward gold sales arrangement with several of DPM's existing Lenders whereby the Company will deliver 45,982 ounces of gold on specified dates over a 21-month period commencing in May 2019 in exchange for an upfront cash prepayment of \$50.0 million. Deliveries of gold will be in the form of unallocated gold credits sourced from any of the Company's own mines during 2019 and 2020.

- On July 11, DPM completed a bought deal financing with a syndicate of investment dealers pursuant to which the Company issued 18,216,000 Common Shares at a price of Cdn\$3.00 per Common Share, for aggregate gross proceeds of \$41.9 million (Cdn\$54.6 million) (the "Offering"). Concurrent with the Offering, DPM also completed a non-brokered private placement of 840,000 Common Shares of the Company at a price of Cdn\$3.00 per Common Share, for additional gross proceeds of \$1.9 million (Cdn\$2.5 million).
- On June 6, the Company announced updated capital and operating costs and economic parameters for its Krumovgrad Gold Project.
- During the year, the Company entered into commodity hedges to reduce its near-term commodity price exposure and, in turn, support the advancement of its growth initiatives. Approximately 92% and 53% of the Company's expected payable copper production for 2017 and 2018, respectively, has been hedged at an average price of \$2.40 and \$2.62 per pound. Approximately 31% of the expected payable gold production in 2017 has been hedged at a floor price of \$1,200 per ounce and a ceiling price of \$1,497 per ounce.
- Final re-designation of the Krumovgrad Gold Project land from forestry to industrial occurred in March and formal transfer of land ownership to DPM was completed in May.
- In April, DPM acquired the remaining outstanding shares of Avala Resources Ltd. ("Avala") to increase from 50.1% to 100% ownership of Avala's exploration assets in Serbia. As a result of this transaction, Avala's Mineral Resources are now included in DPM's total Mineral Resources. See "Summary of Mineral Reserve and Mineral Resource Estimates", and "Exploration Assets" for further details on the Serbian exploration assets.
- On April 28, the Company completed the sale of Dundee Precious Metals Kapan ("DPMK") to Polymetal International Plc ("Polymetal"). See "Material Contracts" for further details.
- Completed commissioning of the new, larger copper converters at the Tsumeb smelter in the first quarter.

#### 2015

- In December, DPM announced a 15% increase in Measured and Indicated Resources at Chelopech following successful demonstration of a methodology for crown pillar extraction that can be applied to mine previously restricted resources.
- The DPMT sulphuric acid plant commenced commercial production in the fourth guarter.
- Construction of the new larger copper converters at the Tsumeb smelter was completed at year end, as planned.
- On November 19, the Company received final approval of the main Detailed Development Plan ("DDP") for the Krumovgrad Gold Project.
- Approximately 90% of the expected copper production for 2015 was hedged at an average price of \$3.21 per pound.
- On November 20, 7.7 million Common Share purchase warrants that entitled the holder to purchase one Common Share at Cdn\$3.25 per Common Share expired unexercised.
- The Company hedged its 2015 contracted gold production from pyrite concentrate at an average price of \$1,233
  per ounce.

#### 2014

- DPM announced the extension of the Chelopech mine life from 2023 to 2025 with an updated Mineral Reserve and Mineral Resource Estimate.
- The Chelopech mill pyrite recovery circuit, designed to capture a significant portion of the unrecovered gold contained in the pyrite minerals, previously going to tailings, was commissioned in the first quarter. The project was completed 10% under budget at \$13.5 million and on schedule and allows the Company to produce up to 260,000 tpa of gold bearing pyrite concentrate containing up to 50,000 ounces of gold which is sold to interested smelters.
- DPM increased its revolving credit facility ("RCF") by \$125 million to \$275 million, to support the funding associated with its growth projects, including the Krumovgrad Gold Project. See "Material Contracts" for further details.
- DPMT contracted 300,000 tonnes of complex copper concentrates with third party suppliers, via Louis Dreyfus Commodities Metals Suisse SA ("LDC"), alongside Chelopech copper concentrates for smelting at the Tsumeb facility.

#### **DESCRIPTION OF THE BUSINESS**

#### General

DPM is a Canadian based, international gold mining company engaged in the acquisition of mineral properties, exploration, development mining and processing of precious metals.

The Company's vision is to be a progressive gold mining company that unlocks superior value through innovation and strong partnerships with stakeholders. Through its operational excellence and innovation capability, DPM is focused on optimizing the performance of each of its operating assets to deliver strong margins and safe and reliable production results. The Company is also focused on building a pipeline of future growth opportunities that leverage that same expertise to unlock hidden value and generate superior returns on the capital employed in those projects. DPM's demonstrated ability to engage and work closely with key stakeholders on a responsible and sustainable approach to mining, allows it to be successful in the countries in which it operates. See "Exploration Assets" for further details on the pipeline of assets.

The Company's principal operating assets include the Chelopech mine, which produces a copper concentrate containing gold, copper and silver, and a pyrite concentrate containing gold, located east of Sofia, Bulgaria and the Tsumeb smelter, a specialty complex copper concentrate processing facility located in Tsumeb, northern Namibia. DPM also holds interests in a number of developing gold and exploration properties located in Bulgaria, Serbia, and northern Canada, including the Krumovgrad Gold Project, which is currently under construction and expected to commence production in the fourth quarter of 2018, and its 10.7% interest in Sabina Gold & Silver Corp. ("Sabina").

DPM also owns 100% of Avala, which is incorporated in British Columbia, Canada, and focused on the exploration and development of the Lenovac project, the Timok gold project, the Tulare copper and gold project and other early stage projects in Serbia.

The Company's principal product is a copper concentrate containing gold, copper and silver, which is produced at the Chelopech mine in Bulgaria. The complexity of the Chelopech concentrate limits processing to a few smelters worldwide and the majority of this concentrate is therefore processed at the Company's Tsumeb Smelter in Namibia.

DPM strategically acquired the smelter in March 2010 and thereby secured the downstream processing of the Chelopech concentrate for the LOM. Following the completion of an agreement between DPM and LDC in May 2010, and subject to certain rights of the Company, LDC has exclusive rights through 2020 to purchase the Chelopech concentrate for toll processing through Tsumeb, to source the balance of the concentrate for toll processing through the smelter, and to receive and sell blister copper produced by the smelter. DPMT has secured over 90% of its planned copper concentrate throughput for 2017 and 2018 pursuant to tolling arrangements established in prior years with LDC. The pricing agreed under these arrangements provides DPMT with substantially higher treatment charge and penalty revenue than is typically received by smelters for normal copper concentrates due to the complex nature of the concentrate being processed.

During the financial years 2015 and 2016, the Company sold 115,179 and 106,752 tonnes of copper concentrate, 224,829 and 217,872 tonnes of pyrite concentrate and smelted 196,107 and 200,272 tonnes of complex concentrate, generating net revenue from continuing operations of \$225 million and \$279 million, respectively.

# **Foreign Operations**

The Company currently owns 100% of the Chelopech mining operation in Bulgaria and 100% of the Tsumeb smelter located in Namibia, which represent its foreign operations. In addition, it holds a 100% interest in the Krumovgrad Gold Project in Bulgaria, which is currently under construction. Any changes in regulations (or the application of regulations) or shifts in political attitudes in these foreign jurisdictions are beyond the control of the Company and may adversely affect its business. Future development and operations may be affected in varying degrees by factors such as government regulations (or changes to such regulations or the application of regulations) with respect to the restrictions on production, export controls, taxes, royalties, expropriation of property, repatriation of profits, the environment land use, water use, operating activities, land claims of local people and mine safety. The impact of these factors cannot be accurately predicted. See "Risk Factors — Foreign Country and Political" for further details.

#### **Sustainability and Social Responsibility**

The Company believes that "doing well" and "doing good" are not mutually exclusive endeavors. As such, the Company continuously works toward achieving best practice in mining, processing, environmental responsibility and stewardship, and health and safety programs across all of its operations, projects or other assets. The Company also works toward ensuring that sustainable returns are delivered to its stakeholder communities and countries and it is seen as a responsible contributor to the social and economic wellbeing of those communities.

We refer to this overall approach as "Net Positive Impact", where our overall aim is to not only maximize the internal net benefits ("doing well"), but also the external net benefits ("doing good"). This approach starts with the identification of those net benefits, an analysis of the relevant aspects that the Company considers "material", and an evolving and continuously improving approach to managing those aspects to ensure they are maximized over time throughout the life cycle of the operations, including post closure.

Internal benefits and costs are generally those covered by the financial aspects of the Company's business (revenue, cash flows, capital and operating expenditures etc.). External benefits are those that accrue to the societies in which the Company operates, such as employment (direct, indirect and induced), skills training and development, community investment and donations, and royalties and taxes. External costs mainly relate to environmental impacts, such as emissions and waste, water use, biodiversity impacts, loss of ecosystem services, and noise and nuisance (visual and dust impacts). These further translate into a set of material aspects that the Company monitors and reports on annually in its sustainability reporting framework.

The Company has been reporting against its identified material sustainability aspects since 2011. In May 2015, the Company published its fourth annual Sustainability Report in accordance with the latest Global Reporting Initiative guidelines (G4). In 2016, the Company moved to a two-year reporting cycle and published updated data tables providing information on performance for 2015. In the report for 2014, the Company outlined its materiality assessment in detail, which fall into four main categories: health and safety; environment; labour practices (including human rights); and social. This materiality assessment has not changed.

In January 2017, the Company finalized a strategic equity investment by the EBRD. DPM and the EBRD agreed to extend the EBRD Performance Requirements ("PRs") to all DPM projects and operations. An updated Environmental and Social Action Plan was put in place for the smelter operation in Namibia, which further specifies the areas that the Company will be working on to achieve full compliance with the PRs. The following is a summary of how the Company manages these aspects. Performance can be found either within each operational section of this document and/or in the 2016 Sustainability Report that will be published in May 2017.

# **Health and Safety**

The health and safety of employees is of paramount importance at DPM and the Company allocates a significant amount of resources to ensuring that its employees go home safe and healthy every day.

DPM's corporate-wide Health and Safety Policy applies to all employees and contractors who work at the Company's sites. In addition to internal policies and standards, the Company also complies with strict and rigorous national health laws and safety standards and laws in all jurisdictions.

As a value and priority, the Company strives to make safety present in the everyday life of each of its employees. For example, the Company has a variety of procedures, regulations, toolbox talks, meetings and conversations, and also implements mandatory safety training for visitors and employees. These procedures are transferred to DPM's contractors and subcontractors. As well, the Company makes every effort to ensure the dialogue continues in the conversations of local community residents and amongst the Company's employees' families. DPM believes that maintaining an open dialogue about safety successes and failures will help the Company get closer to its goal of zero harm.

Guided by the Company's core values, DPM takes a systems approach to managing its environmental and health and safety risks and programs. One of the primary goals of the Company is to have one consistent and auditable integrated management system across the entire company for its environmental, health and safety programs.

#### **Environment**

The material environmental aspects that are most relevant to DPM are emissions, energy use, waste management, water use and discharge and, where relevant, biodiversity impacts. Also, because the Company is engaged in the extraction and processing of complex concentrate containing elevated arsenic levels, a primary focus of the Company is the stewardship of products and materials, particularly those related to the smelting of complex concentrate.

DPM's Environment and Sustainable Development Policy drives its strategy and actions with respect to environmental responsibility. This policy encompasses not only how DPM cares for the physical and biotic environment, but also for the health and safety of the communities at large. The corporate policies are supplemented by numerous site-specific policies and procedures that ensure DPM remains in compliance with local and national laws.

At all of its operations, the Company employs experienced environmental experts that oversee its day-to-day activities. In addition, DPM uses external environmental consultants for the design and implementation of various environmental projects, regulatory audits, management planning, feasibility studies and environmental and social impact assessments.

The bulk of materials used in mining and processing, including the Company's smelter operations at Tsumeb, are non-renewable and are primarily derived from fossil fuels (i.e. black oil, diesel, gasoline), and purchased electricity. Other materials used include lime, cement (primarily at Chelopech), blasting agents (at Chelopech) and steel balls.

DPM acknowledges that water is a major element of all our operations and a fundamental consideration for developing environmentally responsible project and operational sites. As such, we continuously strive for efficient and effective water management systems.

The Company also acknowledges the level of impact the mining industry has on climate change. DPM's ongoing investment in plant upgrades and modernization, and its innovative use of technology to "digitalize" its operations at all DPM sites is resulting in incremental improvements in energy efficiency and reductions in key emissions, such as greenhouse gases ("GHG") and sulphur dioxide. As leaders in promoting sustainable growth and environmental responsibility, DPM has several programs in place at its sites to reduce DPM's overall contribution to GHG and other emissions.

Both Bulgarian and European Union legislation ensures that the management of mine waste in Bulgaria complies with strict guidelines and protocols. Corporate-wide waste management policies, commitments and management systems are also being developed.

DPM considers an important part of mine planning to be the development of a mine closure plan. All DPM sites have mine closure plans in place that include cost estimates for the closure and rehabilitation of those sites.

The Company's main product is copper concentrate that is produced from ore mined at the Chelopech mine in Bulgaria. Chelopech concentrate has a high and naturally occurring arsenic content, and is further processed at the Company's smelter at Tsumeb and at the Xiangguang Copper Co. ("XGC") in China. Since 2012, the Company has carried out several evaluations of the management of arsenic and is implementing a number of internal initiatives to ensure that best practice in arsenic processing and environmental management is followed. Where best practice has not yet been established, we are helping to develop it. Also, with the assistance of an independent technical advisory council, comprised of global experts on smelters and metal exposures, the Company continues to develop and improve a set of internal arsenic management principles and standards that will guide all aspects of the Company's responsible management, monitoring, stewardship, storage and neutralization of arsenic by-products at DPM's sites.

These are some of the initiatives that are contributing to the body of knowledge that forms the backbone of DPM's Responsible Arsenic Management Program. During 2016, DPM decided to cease the production of arsenic trioxide and started the process of shutting down the production facility. This decision will enable DPMT to direct its efforts and resources (financial, time and people) in the optimization and growth of the smelting business in Tsumeb. DPM continues to work on developing alternative ways to deal with the arsenic waste which is generated from the smelting of the complex concentrates, and is currently deposited in a hazardous waste management facility.

It has been part of DPM's long-term strategy to bring the Tsumeb smelter to internationally accepted environmental standards. The Company determined that a sulphuric acid plant was the best solution to capture and process the off-gases from the smelter, and, in turn, reduce emissions and considerably improve working and living conditions around the smelter. This acid plant was completed and commissioned in the third quarter of 2015. A number of other initiatives are underway to further improve the water management on site, further reduce the fugitive emissions and improve the environmental monitoring program. See "Risk Factors" – "Environmental, Health and Safety" for further details with respect to the financial and operational effects of environmental protection requirements on the Company's business.

# **Labour Practices and Social**

Each DPM site is located adjacent to communities that are directly and indirectly impacted by the Company's operations. The Company relies on these communities to be a source of talent and other essential services that ensure smooth, efficient and profitable operations. In short, the execution of the Company's strategic business plan is reliant on the good relations with, and full support of, local communities.

DPM conducts extensive stakeholder engagement activities on a regular basis. The Company's efforts are supplemented by environmental and social impact assessments, and further supported by formal stakeholder engagement plans. Additionally, the Company's Community Investment Policy is intended to provide guidance and boundaries on selecting and designing community investment that is mutually beneficial to DPM's stakeholders and its operations and assist local communities in achieving their sustainable development aspirations.

DPM's employees are one of its most important stakeholder groups. A substantial proportion of the Company's financial resources are allocated to employee training, fair compensation and to protecting the Company's employees from exposure to undue health and safety risks. Due to the cultural diversity of DPM's workforce, the Company has created a blend of corporate, regional and site-based human resource policies and programs. This combined approach has allowed the Company to implement targeted local programs that attract, retain and motivate the Company's staff, while still reflecting local needs and cultures.

Human resource policies are incorporated into the Company's Code of Business Conduct & Ethics, the Company's various policies, site-specific policies and collective bargaining agreements, where applicable, and the local labour laws and standards in the countries where DPM operates.

At all of DPM's operations, the Company strives to attract and hire locally-based employees and is progressing with its plans to build and develop in-country senior management teams comprised of local nationals. Professional development is a key objective and the Company provides a variety of learning opportunities.

DPM believes that a strategic approach to local employment and community investment is the best way to ensure the sustainability of communities after mine closure.

DPM undertook a Human Rights Compliance Assessment during 2016, based on the Danish Institute for Human Rights framework. The assessment applies the relevant international human rights standards to various aspects of the Company's operations in order to identify, where possible, gaps in policies, standards, procedures and practices that create risks of conflict with international human rights standards. DPM will update the policy level documents to adequately cover the Human Rights aspect and will work towards improving the knowledge and understanding of these issues, not only internally, but through the whole supply chain as well.

# **Operational Risk Management**

In addition to the system of managing health, safety and environmental risks, the Company applies a consistent approach to operational risk management. This approach consists of a multidisciplinary risk assessment where all risks are identified and measured on an annual basis. Mitigation plans are developed and implemented with monitoring throughout the year. The operational risk management process is linked to the external risk assessment process used to determine the required insurance coverage.

# **Operations of the Company**

# **Three Year Production History**

|   |                 | Chelopech        |            |           | Kapan <sup>1</sup> |            |
|---|-----------------|------------------|------------|-----------|--------------------|------------|
|   | 2016            | 2015             | 2014       | 2016      | 2015               | 2014       |
| Ore Mined (tonnes)                                    | 2,211,814       | 2,039,921        | 2,053,612  | 130,982   | 409,848            | 406,585    |
| Ore Milled (tonnes)                                   | 2,212,340       | 2,052,138        | 2,076,112  | 129,521   | 411,121            | 402,602    |
| Head Grade (ore milled):                              |                 |                  |            |           |                    |            |
| Copper (%)  | 0.98            | 1.10             | 1.18       | 0.28      | 0.32               | 0.28       |
| Gold (g/mt)   | 3.43            | 3.70             | 3.72       | 1.85      | 2.25               | 1.97       |
| Zinc (%)  | -               | -                | -          | 1.16      | 1.55               | 1.54       |
| Silver (g/mt)   | 8.95            | 10.69            | 9.14       | 32.15     | 41.49              | 39.47      |
| Copper and Zinc<br>Concentrates Produced<br>(mt)      | 107,108         | 113,466          | 125,748    | 3,718     | 14,575             | 13,630     |
| Metals contained in copper                            | and zinc conce  | ntrates produced | 1          |           |                    | 1          |
| Copper (lbs)  | 38,458,797      | 39,760,363       | 44,306,730 | 712,358   | 2,652,356          | 2,149,756  |
| Gold (oz)   | 118,428         | 114,951          | 124,371    | 6,317     | 24,850             | 20,935     |
| Zinc (lbs)  | -               | -                | -          | 2,784,359 | 11,886,570         | 12,048,683 |
| Silver (oz)   | 227,673         | 242,094          | 235,983    | 111,279   | 461,183            | 427,452    |
| Copper and Zinc<br>Concentrates Delivered<br>(mt)     | 106,752         | 115,179          | 122,818    | 4,455     | 14,363             | 13,722     |
| Payable metals in copper a                            | nd zinc concent | rates sold:      |            |           |                    |            |
| Copper (lbs)  | 36,074,302      | 37,913,492       | 40,607,810 | 837,599   | 2,358,907          | 2,141,204  |
| Gold (oz)   | 107,944         | 109,981          | 115,337    | 7,304     | 20,618             | 18,883     |
| Zinc (lbs)  | -               | -                | -          | 2,687,889 | 10,267,393         | 10,119,888 |
| Silver (oz)   | 160,537         | 192,468          | 168,415    | 120,282   | 356,956            | 359,921    |
| Pyrite concentrate:                                   |                 |                  |            |           |                    |            |
| Pyrite Concentrate<br>Produced (mt)                   | 214,775         | 239,298          | 163,237    | -         | -                  | -          |
| Gold Contained in Pyrite<br>Concentrate Produced (oz) | 47,237          | 54,774           | 36,466     | -         | -                  | -          |
| Pyrite Concentrate Sold (mt)                          | 217,872         | 224,829          | 163,347    | -         | -                  | -          |
| Payable Gold in Pyrite<br>Concentrate Sold (oz)       | 31,380          | 38,156           | 26,514     | -         | -                  | -          |

|                                  | Tsumeb  |         |         |  |  |  |
|----------------------------------|---------|---------|---------|--|--|--|
|                                  | 2016    | 2015    | 2014    |  |  |  |
| Complex concentrate smelted (mt) | 200,272 | 196,107 | 198,346 |  |  |  |
| Acid produced (mt)               | 191,630 | 36,904  | -       |  |  |  |

<sup>(1)</sup> On April 28, 2016, the Company completed the sale of its Kapan mine located in Armenia to Polymetal.

For further financial information relating to the production of the Company and other business and financial information, please refer to the MD&A for the financial year ended December 31, 2016 filed on SEDAR at <a href="www.sedar.com">www.sedar.com</a> on February 27, 2017 and on the Company's website at <a href="www.dundeeprecious.com">www.dundeeprecious.com</a>.

# Specialized Skills and Knowledge

All aspects of the Company's business require specialized skills and knowledge. Such skills and knowledge include the areas of geology, metallurgy, drilling, mine planning and operations, engineering, construction, regulatory compliance, information technology, finance and accounting. The Company has been successful to date in locating and retaining employees and contractors with such skills and knowledge.

# **Competitive Conditions**

The mining business is a competitive business. The Company competes with numerous companies and individuals that have resources significantly in excess of the resources of the Company in the search for: (i) attractive mineral properties; (ii) qualified service providers and employees; and (iii) equipment and suppliers. The ability of the Company to acquire additional mineral properties in the future will depend on its ability to operate and develop its present properties, and also on its ability to select and acquire suitable producing properties or prospects for development or exploration. See "Risk Factors - Competition" for further details.

# **Business Cycles**

The mining business is subject to commodity price cycles. The marketability of minerals and mineral concentrates and the ability to finance the Company on favourable terms is also affected by worldwide economic cycles.

# **Employees**

At the end of our last financial year, we employed directly, or through our subsidiaries, 2,898 employees including full-time permanent employees, contractors and project-related sub-contractors, as well as expatriates, at our operations, including exploration and corporate head offices.

# Summary of Mineral Reserve and Mineral Resource Estimates

In 2015, DPM adopted a new method for the reporting of Measured and Indicated Mineral Resources. Estimates of Measured and Indicated Mineral Resources are reported, exclusive of those Mineral Resources modified to produce the Mineral Reserves. This methodology presents what can potentially be added to the life of each project/operation. The following table summarizes the Company's Mineral Reserve and Mineral Resource estimates as at the dates set out in the footnotes.

| MINERAL RESERVES        |        | GOLD  |        | SILVER |        | COPPER |        |
|-------------------------|--------|-------|--------|--------|--------|--------|--------|
|                         | Tonnes | Grade | Ounces | Grade  | Ounces | Grade  | Pounds |
|                         | М      | g/t   | M      | g/t    | M      | %      | М      |
| Proven                  | 14.0   | 3.38  | 1.524  | 6.40   | 2.886  | •      | 232    |
| Chelopech               | 11.4   | 2.92  | 1.075  | 7.21   | 2.652  | 0.92   | 232    |
| Krumovgrad (Upper Zone) | 1.1    | 3.46  | 0.124  | 1.91   | 0.068  | -      | -      |
| Krumovgrad (Wall)       | 1.5    | 6.83  | 0.325  | 3.5    | 0.166  | -      | -      |
| Timok                   | -      | -     | •      | •      | •      | -      | -      |
| Tulare - Kiseljak       | -      | -     | -      | -      | -      | -      | -      |
| Tulare - Yellow Creek   | -      | -     | •      | -      | -      | -      | -      |

| MINERAL RESERVES        |        | GO    | LD     | SIL   | /ER    | СОР   | PER    |
|-------------------------|--------|-------|--------|-------|--------|-------|--------|
|                         | Tonnes | Grade | Ounces | Grade | Ounces | Grade | Pounds |
|                         | М      | g/t   | М      | g/t   | M      | %     | М      |
| Probable                | 12.0   | 3.32  | 1.277  | 4.94  | 1.903  | •     | 166    |
| Chelopech               | 8.4    | 3.42  | 0.920  | 6.30  | 1.695  | 0.90  | 166    |
| Krumovgrad (Upper Zone) | 3.5    | 3     | 0.337  | 1.75  | 0.197  | -     | -      |
| Krumovgrad (Wall)       | 0.1    | 5.54  | 0.02   | 2.93  | 0.011  | -     | -      |
| Timok                   | -      | -     | -      | -     | -      | -     | -      |
| Tulare - Kiseljak       | -      | -     | -      | -     | -      | -     | -      |
| Tulare - Yellow Creek   | -      | -     | -      | -     | -      | -     | -      |
| Proven and Probable     | 26.0   | 3.35  | 2.801  | 5.73  | 4.790  | 1     | 398    |
| Chelopech               | 19.8   | 3.13  | 1.995  | 6.83  | 4.347  | 0.91  | 398    |
| Krumovgrad (Upper Zone) | 4.6    | 3.11  | 0.461  | 1.79  | 0.266  | -     | -      |
| Krumovgrad (Wall)       | 1.6    | 6.74  | 0.345  | 3.46  | 0.177  | -     | -      |
| Timok                   | -      | -     | -      | -     | -      | -     | -      |
| Tulare - Kiseljak       | -      | -     | -      | -     | -      | -     | -      |
| Tulare - Yellow Creek   | -      | -     | -      | -     | -      | -     | -      |

| MINERAL RESOURCES       |        | GC    | DLD    | SIL   | VER    | COF   | PPER   |
|-------------------------|--------|-------|--------|-------|--------|-------|--------|
|                         | Tonnes | Grade | Ounces | Grade | Ounces | Grade | Pounds |
|                         | М      | g/t   | М      | g/t   | М      | %     | М      |
| Measured                | 8.8    | 3.45  | 0.972  | 9.46  | 2.664  | -     | 218    |
| Chelopech               | 8.8    | 3.45  | 0.972  | 9.46  | 2.664  | 1.13  | 218    |
| Krumovgrad (Upper Zone) | -      | -     | -      | -     | -      | -     | -      |
| Krumovgrad (Wall)       | -      | -     | -      | -     | -      | -     | -      |
| Timok                   | -      | -     | -      | -     | -      | -     | -      |
| Tulare - Kiseljak       | -      | -     | -      | -     | -      | -     | -      |
| Tulare - Yellow Creek   | -      | -     | -      | -     | -      | -     | -      |
| Indicated               | 38.6   | 1.73  | 2.148  | -     | 1.235  | -     | 83     |
| Chelopech               | 3.9    | 3.44  | 0.428  | 9.93  | 1.235  | 0.97  | 83     |
| Krumovgrad (Upper Zone) | -      | -     | -      | -     | -      | -     | -      |
| Krumovgrad (Wall)       | -      | -     | -      | -     | -      | -     | -      |
| Timok                   | 34.7   | 1.54  | 1.720  | -     | -      | -     | -      |
| Tulare - Kiseljak       | -      | -     | -      | -     | -      | -     | -      |
| Tulare - Yellow Creek   | -      | -     | -      | -     | -      | -     | -      |
| Measured and Indicated  | 47.4   | 2.05  | 3.119  | -     | 3.899  | -     | 301    |
| Chelopech               | 12.6   | 3.45  | 1.399  | 9.61  | 3.899  | 1.08  | 301    |
| Krumovgrad (Upper Zone) | -      | -     | -      | -     | -      | -     | -      |
| Krumovgrad (Wall)       | -      | -     | -      | -     | -      | -     | -      |
| Timok                   | 34.7   | 1.54  | 1.720  | -     | -      | -     | -      |
| Tulare - Kiseljak       | -      | -     | -      | -     | -      | -     | -      |
| Tulare - Yellow Creek   | -      | -     | -      | -     | -      | -     | -      |

| MINERAL RESOURCES       |        | GOLD  |        | SILVER |        | COPPER |        |
|-------------------------|--------|-------|--------|--------|--------|--------|--------|
|                         | Tonnes | Grade | Ounces | Grade  | Ounces | Grade  | Pounds |
|                         | М      | g/t   | М      | g/t    | М      | %      | М      |
| Inferred                | 549.5  | -     | 3.951  | -      | 0.432  | -      | 2837   |
| Chelopech               | 1.8    | 2.4   | 0.138  | 7.46   | 0.421  | 0.96   | 37     |
| Krumovgrad (Upper Zone) | 0.3    | 1.3   | 0.013  | 1.06   | 0.011  | =      | -      |
| Krumovgrad (Wall)       | 0.0    | 0.9   | 0.000  | 0.88   | 0.000  | =      | -      |
| Timok                   | 0.4    | 1.4   | 0.000  | -      | -      | -      | -      |
| Tulare - Kiseljak       | 459.0  | 0.2   | 3.000  | -      | -      | 0.22   | 2,200  |
| Tulare - Yellow Creek   | 88.0   | 0.3   | 0.800  | -      | -      | 0.3    | 600    |

- (1) The rounding of tonnage and grade figures has resulted in some columns showing relatively minor discrepancies in sum totals;
- (2) Mineral Reserves, Measured, Indicated and Inferred Mineral Resources have been reported in accordance with NI 43-101 and the classification adopted by the CIM;
- (3) Measured and Indicated Mineral Resources are additional to Mineral Reserves;
- (4) Mineral Reserves and Resources may be subject to legal, political, environmental and other risks and uncertainties. Refer to the disclosure in this AIF and the Company's Technical Reports for more information with respect to key assumptions, parameters and risks relating to the above estimates;
- (5) Mineral Reserves and Resources estimates for the Company's material properties have been reviewed and prepared by CSA that provides multi-disciplinary services to the global resources industry and is independent of the Company; See also "Names and Interests of Experts" for information with respect to the individual QPs who reviewed the estimates;
- (6) Mineral Reserves and Resources estimates for Chelopech, Krumovgrad and Timok are based on long term metals prices of USD 1,250/oz Au, USD 23/oz Ag, USD 2.75/lb Cu and USD 0.85/lb Zn;
- (7) Chelopech Mineral Resources are based on a gold equivalent cut-off 3.0 g/t (Au + Cu\*2.06) and a greater than USD 0 profit/tonne test using NSR analysis and are effective as of December 31, 2016;
- (8) Chelopech Mineral Reserves are based on a gold equivalent cut-off of 3.0 g/t (Au + Cu\*2.06) and a cut-off of USD 10 profit/tonne using NSR analysis and are effective as of December 31, 2016;
- (9) Krumovgrad Mineral Reserves and Resources are based on a gold cut-off grade of 0.6 g/t for the Upper Zone and Overburden and of 0.8 g/t for the Wall and are effective as of December 31, 2013;
- (10) Timok Mineral Resources are based on a cut-off of 0.5 g/t Au for Bigar Hill and Korkan, whilst 0.65 g/t Au for Kraku Pester. The effective date of the Mineral Resource estimate is March 31, 2017;
- (11) Mineral Resource estimates for Tulare Kiseljak and Tulare Yellow Creek are based on metal prices of USD 1,300/oz Au and USD 3.00/lb Cu:
- (12) Tulare Kiseljak Mineral Resources are based on a cut-off of 0.15% CuEq (((Au\*41.80) + (Cu\*66.00))/66.00) and assumes an open pit mining scenario. The effective date of the Mineral Resource estimate is March 31,2014;
- (13) Tulare Yellow Creek Mineral Resources are based on a cut-off of 0.3% CuEq (((Au\*41.80) + Cu\*66.00))/66.00) and assumes a bulk underground mining scenario. The effective date of the Mineral Resource estimate is March 31, 2014;
- (14) Economic assumptions for Tulare Kiseljak and Tulare Yellow Creek were prepared by Dunav Resources Ltd., prior to the acquisition by DPM; and
- (15) A Mineral Resource is an inventory of mineralization that under realistically assumed and justifiable technical and economic conditions might become economically extractable, while a Mineral Reserve includes diluting materials and allowances for losses that are expected to occur when the material is mined.

#### Other Disclosure Relating to OSC Requirements for Companies Operating in Emerging Markets

#### Controls Relating to Corporate Structure Risk

DPM has implemented a system of corporate governance, internal controls over financial reporting, and disclosure controls and procedures that apply at all levels of the Company and its subsidiaries. These systems are overseen by the Company's Board, and implemented by the Company's senior management. The relevant features of these systems include:

(a) DPM's Control over Subsidiaries. DPM's corporate structure has been designed to ensure that the Company controls have a measure of direct oversight over the operations of its subsidiaries. DPM's subsidiaries are either wholly-owned or controlled to a large extent by the Company. Accordingly, the Company directly controls the appointments of either all of the directors or such number of directors reflecting the Company's proportional ownership interest of its subsidiaries. The directors of DPM's subsidiaries are ultimately accountable to DPM as the shareholder appointing him or her, and the Board and DPM's senior management. The annual budget and capital investment and exploration programs in respect of each of its subsidiaries are reviewed and approved by the Company. In addition, the Company has established delegations of authority and companion policies to control commitments and expenditures.

Signing officers for foreign subsidiary bank accounts are either employees of DPM or employees/directors of the subsidiary. The establishment of any new banking relationships and/or new bank accounts requires approval from DPM. Monetary authorization limits are established by the Company's subsidiaries and put in place with the respective banking institutions. Signatories and authorization limits for bank accounts are reviewed and revised as necessary, with changes being communicated to the appropriate banking institutions.

- (b) Strategic Direction. The Board is responsible for the overall stewardship of the Company and, as such, supervises the management of the business and affairs of the Company. More specifically, the Board is responsible for reviewing the strategic business plans and corporate objectives, and approving, subject to certain delegated authorities, acquisitions, dispositions, investments, capital expenditures and other transactions and matters that are material to the Company, including those of its material subsidiaries.
- (c) Internal Control over Financial Reporting and Disclosure Controls and Procedures. The Company prepares its consolidated financial statements on a quarterly and annual basis, using International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board and Interpretations of the International Financial Reporting Interpretations Committee which the Canadian Accounting Standards Board has approved for incorporation into Part 1 of the Chartered Professional Accountants of Canada Handbook Accounting. The Company implements internal controls over the preparation of its financial statements and other financial disclosures, including its MD&A, to provide reasonable assurance that its financial reporting is reliable in all material respects and that the quarterly and annual financial statements are being prepared in accordance with IFRS and other financial disclosures, including its MD&A, are being prepared in accordance with relevant securities legislation. These internal controls include the following:
  - (i) The Company has a disclosure control process in place to facilitate the communication of all significant items that should be considered for disclosure in the consolidated financial statements and MD&A, which includes clear lines of responsibility and accountability for those involved in the financial reporting and disclosure process as well as certifications and questionnaires that are completed by management and other personnel;
  - (ii) All public documents and statements relating to the Company and its subsidiaries containing material information (including financial information) are reviewed by management and other personnel, and as applicable, members of the Disclosure Committee, which includes the CEO, the CFO and the Corporate Secretary, before such material information is disclosed to ensure that all material information has been considered by management of the Company and properly disclosed;
  - (iii) As more fully described in paragraph (d), the Company's Audit Committee obtains confirmation from the CEO and CFO as to the matters addressed in the quarterly and annual certifications required under NI 52-109;
  - (iv) The Company's Audit Committee reviews and approves the Company's quarterly and annual financial statements and MD&A and recommends to the Board for the Board's approval of the Company's quarterly and annual financial statements and MD&A, and any other financial information requiring Board approval, prior to their publication or release;
  - (v) The responsibilities of the Company's Audit Committee also provides oversight of the Company's internal control systems including those systems to identify, monitor and mitigate business risks as well as compliance with legal, ethical and regulatory requirements.
  - (vi) The Company's Audit Committee also obtains and reviews reports of the external and internal auditor on significant findings and recommendations on the Company's internal controls together with managements' responses;
  - (vii) The Company's Audit Committee assesses and evaluates the adequacy and effectiveness of the Company's systems of internal control over financial reporting and disclosure, including policies, procedures and systems to assess, monitor and manage the Company's assets, liabilities, revenues and expenses. In addition the Committee reviews and discusses the appropriateness and timeliness of the dispositions of any recommendations for improvements in internal control over financial reporting and procedures;
  - (viii) The Company's Audit Committee also discusses and reviews with management and the internal auditor, the Company's policies and guidelines that govern financial risk assessment and financial risk management; and
  - (ix) Although not specifically a management control, the Company engages its external auditor to perform reviews of the Company's quarterly consolidated financial statements and an audit of the annual consolidated financial statements in accordance with Canadian generally accepted auditing standards.

(d) CEO and CFO Certifications. In order for the CEO and CFO to be in a position to attest to the matters addressed in the quarterly and annual certifications required by NI 52-109, the Company has developed internal processes and procedures and responsibilities throughout the organization for its regular periodic and special situation reporting, in order to provide reasonable assurance that documents and statements relating to the Company and its subsidiaries containing material information is prepared with input from the responsible officers and employees, are available for review by the CEO and CFO in a timely manner, and are appropriately disseminated.

These systems of corporate governance, internal control over financial reporting, and disclosure controls and procedures are designed to ensure that, among other things, the Company has access to material information about its subsidiaries.

# Procedures of the Board

Fund Transfers from the Company's Subsidiaries to DPM

In executing certain normal course monetary transactions, funds are transferred between the Company and its subsidiaries by way of wire transfer. These transactions would typically include the payment of applicable fees for services; reimbursement of costs incurred by the Company on behalf of the subsidiaries; repayment of interest and/or principal on intercompany loans; and the return of capital or payment of dividends from subsidiaries. Capital funding arrangements are established between the Company and its subsidiaries, with defined terms and conditions. The return of capital, or dividends, are declared and paid, if appropriate, after consideration of the current and projected profitability and available liquidity of the applicable subsidiary. Where regulatory conditions exist in the form of exchange controls, all necessary approvals are obtained in advance of the proposed transactions.

# Removal of Directors of Subsidiaries

In respect of its wholly-owned subsidiaries, subject to applicable local corporate laws and the respective constating documents, the Company may remove directors of these subsidiaries from office either by way of a resolution duly passed by the Company at a shareholders' meeting or by way of a written resolution.

Records Management of the Company's Subsidiaries

The original minute books, corporate seal and corporate records of each of the Company's subsidiaries are kept at each subsidiary's respective registered office.

#### **RISK FACTORS**

The operating results and financial condition of the Company are subject to a number of inherent risks and uncertainties associated with its business activities, which include the acquisition, financing, exploration, development, construction and operation of its mine, mill and concentrate processing facilities. The operating results and financial condition are also subject to numerous external factors, which include economic, geo-political, regulatory, legal, tax and market risks impacting, among other things, commodity and acid prices, toll rates, foreign exchange rates, inflation and the availability and cost of capital to fund the capital requirements of the business. Each of these risks could have a material adverse effect on the Company's future business, results of operations and financial condition, and could cause actual results to differ materially from those described in any Forward Looking Statements contained in this AIF and other disclosure documents of the Company. The Company endeavors to manage these risks and uncertainties in a balanced manner with a view to mitigate risk while maximizing total shareholder returns. It is the responsibility of senior management, and the functional head of each business, to identify and to effectively manage the risks of each business. This includes developing appropriate risk management strategies, policies, processes and systems. There can be no assurance that the Company has been or will be successful in identifying all risks or that any risk-mitigating strategies adopted to reduce or eliminate risk will be successful. A description of the more significant business risks and uncertainties affecting the Company are set out below. These risks along with other risks not specifically discussed in this AIF and the Company's other disclosure documents should be considered when evaluating the Company and its outlook. Additional risks not identified below may affect the Company.

# **Metal Prices**

The Company sells and hedges its products at prices that are effectively determined by reference to the traded prices on major commodity exchanges, including the London Metal Exchange, London Bullion Market Association, New York Commodity Exchange, and the Commodity Exchange (a part of the Chicago Mercantile Exchange). The fluctuation of the price of a metal sold by the Company can significantly impact revenues and can significantly impact all-in sustaining cost per ounce of gold and other cost measures that are reported net of by-product credits. Therefore, the prices of gold, copper and silver are major factors influencing the Company's business, results of operations and financial condition, and, in turn, the price for its common shares.

Gold, copper and silver prices can fluctuate widely and are affected by numerous factors beyond the Company's control, including overall global market conditions; the sale or purchase of gold and silver by various central banks, financial institutions and Exchange Traded Funds; interest rates; foreign exchange rates; inflation or deflation; global and regional supply and demand; and the political and economic conditions of major gold, silver and copper producing and consuming countries throughout the world. If gold, silver and copper prices were to decline significantly from current levels, there can

be no assurance that cash flow from operations, together with cash on hand and available lines of credit under the Company's RCF, will be sufficient to meet the Company's operating and capital requirements, including its contractual commitments and mandatory debt repayments, and the Company could be forced to discontinue production, reassess the feasibility of a particular project, and/or could lose its interest in, or be forced to sell, some of its properties. In addition, a significant commodity price decline could result in significant reductions in Mineral Reserve and Mineral Resource estimates, which could adversely impact the value of one or more of the Company's cash generating units and result in an impairment of the carrying value of certain assets, including exploration and evaluation assets, mine properties, and property, plant and equipment.

In accordance with established risk management policies, from time to time, the Company enters into cash settled commodity swap contracts to swap future contracted monthly average metal prices for fixed metal prices in order to reduce the metal price exposure associated with the time lag between the provisional and final determination of concentrate sales as well as its by-product metals price exposure on future sales. Currently approximately 92% and 53% of the Company's expected payable copper production for 2017 and 2018, respectively, has been hedged at an average price of \$2.40 and \$2.62 per pound. The Company also selectively enters into commodity option contracts from time to time to reduce its price exposure. These contracts are entered primarily to provide price protection below a specified "floor" price and, to reduce the upfront cost of these contracts, are typically accompanied by option contracts that provide price participation up to a specified "ceiling" price. Currently, approximately 31% of the Company's expected payable gold in concentrate production for 2017 has been hedged using option contracts, which provide for a floor price of \$1,200 per ounce and a ceiling price of \$1,497 per ounce. These hedges introduce earnings volatility as a result of potential unrealized mark-to-market gains or losses as they are deemed not to be hedges for accounting purposes, notwithstanding that they are effective from an economic perspective.

#### Financing and Liquidity

The Company relies on the cash flows generated from its operations, including provisional payments received from its customers, cash on hand, available lines of credits under its RCF, and its ability to raise debt and equity from the capital markets to fund its operating, investment and liquidity needs. The cyclical nature of the Company's businesses, general economic conditions and the volatility of capital markets are such that conditions could change dramatically, affecting the Company's cash flow generating capability, its ability to maintain, or draw upon, its RCF or the existing terms under its concentrate sales or toll agreements, as well as its liquidity, cost of capital and its ability to access additional capital, which could adversely affect the Company's earnings and cash flows and, in turn, could affect total shareholder returns. To reduce these risks, the Company: (i) prepares regular cash flow forecasts to monitor its capital requirements, available liquidity and compliance with its debt covenants; (ii) strives to maintain a prudent capital structure that is comprised primarily of equity financing as well as long-term amortizing debt and a long-term committed RCF; and (iii) targets a minimum level of liquidity comprised of surplus cash balances and/or available committed lines of credit to avoid having to raise additional capital at times when the costs or terms would be regarded as unfavourable.

As at December 31, 2016, the Company's total debt was \$41.3 million, of which \$16.3 million related to the Company's Term Loans and \$25.0 million to the Company's RCF. As at December 31, 2016, the Company's total debt, as a percentage of total capital, was 7% (December 31, 2015 - 19%) and total debt, net of cash, cash equivalents and short-term investments, as a percentage of total capital, was 5% (December 31, 2015 - 16%). As at December 31, 2016, the Company was in compliance with all of its debt covenants.

The Company's secured term loans (the "Term Loans") are repayable in 10 equal semi-annual installments, which commenced June 2013, and bear interest at a rate equal to the three month U.S. Dollar LIBOR plus 2.80%. The RCF bears interest at a spread above LIBOR, which varies between 2.75% and 5.50% depending upon the tranche being drawn upon and the Company's debt leverage ratio (funded net debt to adjusted EBITDA), as defined in the RCF agreement. The RCF is comprised of a \$45.0 million tranche A maturing in February 2022, a \$150.0 million tranche B maturing in February 2020, and an \$80.0 million tranche C maturing in September 2021 that has quarterly availability reductions of \$4.0 million beginning in the third quarter of 2018. As at December 31, 2016, \$25.0 million was drawn under the RCF.

There can be no assurance that the Company's operations will remain profitable or that the Company will be able to raise capital on terms that it considers reasonable. Adverse commodity market, general economic conditions and adverse capital market conditions could result in a delay or the indefinite postponement of development or construction projects and could adversely impact the Company's financial condition, results of operations and share price.

# Smelter Toll Rates, Metal Recoveries and Feed

The availability of sufficient volumes of high value complex concentrate, at suitable toll rates, is critical to the profitability of the Tsumeb smelter, given the fixed cost nature of the operation. The Company has entered into a long-term agreement to facilitate the procurement of sufficient quantities of suitable high value complex concentrate. There can be no assurance that such concentrate will be available to the smelter in future or that the parties will agree on contracted toll rates that will be sufficient to generate an adequate return. Failure to find sufficient quantities of suitable high value complex concentrate to be processed at acceptable toll rates could have an adverse impact on the Company's business, financial condition and results of operations.

Under this agreement, Tsumeb must return specified quantities of copper, gold and silver. Metal over and under recoveries at the smelter are subject to smelter processing capabilities, contracted terms, and various estimates, including the quantities of metal contained in concentrate received, material in-process and blister delivered. These estimates are based on the Company's process knowledge and multiple assay results. Actual metal deliveries could differ materially from initial estimates and could have an adverse impact on the Company's business, financial condition and results of operations as any over or under recovery of metals is recorded in revenue.

# Foreign Exchange

By virtue of its international operations, the Company incurs costs and expenses in a number of foreign currencies. The revenue received by the Company is denominated in USD since the prices of the metals that it produces are referenced in USD, while the majority of operating and capital expenditures are denominated in Bulgarian leva, which is pegged to the Euro, the Namibian dollar, which is tied to the South African rand, and the Canadian dollar. Fluctuations in these foreign exchange rates give rise to foreign exchange exposures, either favourable or unfavourable, which could have a material impact on the Company's results of operations and financial condition.

From time to time, the Company enters into forward foreign exchange contracts in order to reduce the foreign exchange exposures associated with projected operating expenses and capital expenditures denominated in foreign currencies. Currently, for 2017, approximately 20% of projected Euro operating expenses have been hedged at an average exchange rate of 1.13 and approximately 56% of projected Namibian dollar operating expenses have been hedged at an average exchange rate of 13.87. Approximately 27% of projected Euro capital expenditures related to the Krumovgrad Gold Project have been hedged at an average exchange rate of 1.07.

# **Counterparty Risk**

The Company is exposed to counterparty risk, including market pricing and credit-related risk, in the event any counterparty, whether a customer, debtor or financial intermediary, is unable or unwilling to fulfill their contractual obligations to the Company or where such agreements are otherwise terminated and not replaced with agreements on substantially the same terms.

Under the terms of the Company's existing concentrate sale contracts, the risk to counterparties is mitigated, in part, through required provisional payments that range between 70% and 90% of the provisional value of each lot at the time title of the concentrate transfers. A final adjusting payment, reflecting the actual metal prices for the specified quotational period, is made when final weights and assays are established. During 2016, the Company had contracts with eight customers, one of whom accounted for approximately 56% (2015 - 74%) of the Company's revenue. All contractual commitments are subject to force majeure clauses which, if implemented, could have an adverse impact on the Company's business, financial condition and results of operations.

While there can be no assurance that the Company will not experience a material loss for non-performance by any counterparty with whom it has a commercial relationship, the Company has established policies to manage its credit exposure that include assessing financial strength, limiting aggregate exposure to new and existing counterparties, and using contractual arrangements, including provisional payments and the use of International Swaps and Derivatives Association master netting agreements that permit netting of exposures associated with a single counterparty. Should any such losses arise, they could adversely affect the Company's business, financial condition and results of operations.

# Environmental, Health and Safety

The Company's operations are subject to extensive environmental, health and safety regulations in the various jurisdictions in which it operates. These regulations mandate, among other things, emissions; air and water quality standards; land use; rehabilitation and reclamation; and safety and work environment standards, including human rights. They also set forth limitations on the generation, transportation, storage and disposal of various wastes, including hazardous wastes. Environmental, health and safety legislation continues to evolve and, while the Company takes active steps to monitor this legislation, it could result in stricter standards and enforcement, increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects and a heightened degree of responsibility for companies and their officers, directors and employees. There can be no assurance that future changes in environmental, health and safety regulations, if any, will not adversely affect the Company's operations and business.

Environmental hazards may exist on the properties in which the Company holds interests, which are unknown to the Company at present, and which have been caused by previous or existing owners or operators of the properties.

The Company may also acquire properties with known or undiscovered environmental risk. Any indemnifications by the previous owners or others may not be adequate to pay all the fines, penalties and costs incurred related to such properties. Some of the Company's properties have also been used for mining and related operations for many years before the Company acquired them and were acquired "as is" or with assumed environmental liabilities from previous owners or operators. The Company has been required to address contamination at its properties in the past and may need to do so in the future, either for existing environmental conditions or for leaks, discharges or contamination that may arise from its ongoing operations or other contingencies. The cost of addressing environmental conditions or risks, and liabilities associated with environmental damage may be significant, and could have a material adverse effect on the Company's business results

of operation and financial condition. Production at the Company's mines and processing facilities involves the use of various chemicals, including certain chemicals that are designated as hazardous substances. Contamination from hazardous substances, either at the Company's own properties or other locations for which it may be responsible, may subject the Company to liability for the investigation or remediation of contamination, as well as for claims seeking to recover costs for related property damage, personal injury or damage to natural resources. The occurrence of any of these adverse events could have a material adverse effect on the Company's business, financial condition and results of operations.

The operations of the Company require licenses and permits from various governmental authorities to develop and exploit its properties, and the process for obtaining licenses and permits from governmental authorities often takes an extended period of time and is subject to numerous delays and uncertainties. Such licenses and permits are subject to change in various circumstances.

The Company's exploration programs are subject to laws and regulations relating to exploration procedures, employee health and safety, air quality standards, pollution of stream, river and fresh water sources, odour, noise, dust, and other environmental protection controls adopted by governmental authorities as well as the rights of adjoining property owners.

Failure to comply with applicable laws, regulations and permitting requirements may result in enforcement actions, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed and may include corrective measures requiring capital expenditures, installation of additional equipment or remedial actions. Parties engaged in mining and processing operations or in the exploration or development of mineral properties may be required to compensate those suffering loss or damage by reason of the mining and processing activities and may have civil or criminal fines or penalties imposed for violations of applicable laws or regulations.

Amendments to current laws, regulations, and permits and licenses governing the Company's mining, processing, development and exploration activities, or more stringent implementation thereof, could have a material adverse impact on the Company and cause increases in exploration expenses, capital expenditures, production costs or future rehabilitation costs or reduction in levels of production at producing properties or require abandonment or delays in development of new mining properties.

The Company has completed a major multi-year capital program at its smelter in Namibia directed at modernizing the environmental equipment being utilized and debottlenecking its processing capacity. This included the completion of a sulphuric acid plant, which has reduced the plant's  $SO_2$  emissions. The Company is committed to making further improvements to the health, safety and environmental performance of the smelter and is continuously assessing the scope of any capital expenditures required to support these further improvements. The Company's environmental and occupational health and safety performance will be subject to continued monitoring by the Namibian authorities to ensure that the modifications made to the off-gas and dust handling systems and the completion of the acid plant continue to deliver on the expected decrease in emissions. Failure of these new systems and the acid plant to achieve the expected environmental and occupational health outcomes could adversely impact the Company's future production, results of operations and financial condition.

The Company recognizes a liability for its asset retirement obligations ("ARO") when a legal and/or constructive obligation is identified. The liability is measured at the present value of estimated costs required to rehabilitate the operating locations based on the risk free nominal discount rates applicable to the countries in which the operations are located. The carrying value of the ARO liability was \$30.3 million and \$35.1 million at December 31, 2016 and 2015, respectively. Changes in the underlying assumptions used to estimate the AROs as well as changes to environmental laws and regulations could cause material changes in the expected cost and the fair value of the AROs and these changes could have a material adverse impact on the Company's results of operations and financial condition.

#### **Operations**

Mining operations and related processing and infrastructure facilities are subject to risks normally encountered in the mining and metals industry. Such risks include, without limitation, environmental hazards, industrial accidents, disruptions in the supply of critical materials and supplies, labour disputes, changes in laws, technical difficulties or failures, equipment failure, failure of retaining dams around tailings disposal areas which may result in environmental pollution and consequent liability, unusual and unexpected geologic formations, seismic activity, rock bursts, cave-ins, flooding and other conditions involved in the drilling and removal of material. Such risks could result in damage to, or destruction of, mines and other processing facilities, damage to life or property, environmental damage, delays in mining and processing, losses and possible legal liability. Any prolonged downtime or shutdowns at the Company's mining and processing facilities could materially affect the Company's business, financial condition and results of operations.

Success of the Company's operations also depends on adequate public infrastructure. Reliable roads, bridges, power sources and water supplies are important determinants which affect capital and operating costs. Natural events, such as seismic events and severe climatic conditions, as well as sabotage, government or other interference in the maintenance or provision of such infrastructure could adversely affect the Company's business, financial condition and results of operations.

#### Dependence on a Restricted Portfolio of Assets

The Company's operations at the Chelopech mine in Bulgaria accounted for the vast majority of the Company's gold and copper production in 2016 and are expected to continue to do so in 2017 and 2018, following which the Krumovgrad Gold Project is expected to be operational. Any adverse condition affecting the Chelopech mine could have an adverse impact on the Company's business, financial condition and results of operations. Until such time as the Company acquires or develops other significant producing assets, the Company will continue to be dependent on its operations at the Chelopech mine for a substantial portion of its cash flow provided by mining activities.

# **Production, Operating and Shipping Costs**

Many unforeseen factors can impact the Company's future production and total cash costs of production, such as cost of inputs used in mining and processing operations; cost of fuel, energy, supplies, labour and equipment; availability of suitable high value complex concentrates to be processed at the smelter; regulatory factors; royalties and taxes; foreign exchange rates; adverse climatic conditions and natural phenomena; and industrial accidents can impact the accuracy of these projections. As such, there can be no assurance that production and production cost estimates will be achieved. Failure to achieve production or total cash cost estimates could have an adverse impact on the Company's business, financial condition and results of operations.

The Company contracts for the shipment of its concentrates to its customers on varying terms and conditions, all subject to the prevailing rates, availability and general circumstances surrounding this market. Adverse changes to the shipping markets and/or the terms and conditions of shipping contracts could have a material adverse impact on the Company's business, financial condition and results of operations.

#### **Mineral Resources and Mineral Reserves**

The Mineral Resources and Mineral Reserves disclosed by the Company are estimates and no assurance can be given that the anticipated tonnages and grades will be achieved or that the indicated level of recovery will be realized. There are numerous uncertainties inherent in estimating Mineral Resources and Mineral Reserves, including many factors beyond the Company's control. Such estimation is a subjective process and the accuracy of any resource estimate is a function of the quantity and quality of available data and of the assumptions made and judgments used in engineering and geological interpretation. Short-term operating factors, such as the need for orderly development of the ore bodies or the processing of new or different ore grades, may cause the mining operation to be unprofitable in any particular accounting period. In addition, there can be no assurance that gold, silver or copper recoveries in small scale laboratory tests will be duplicated in larger scale tests under on-site conditions or during production.

Fluctuations in gold, copper and silver prices, results of drilling, change in cut-off grades, metallurgical testing, production and the evaluation of mine plans subsequent to the date of any estimates may require revision of such estimates. The volume and grade of Mineral Reserves mined and processed, and the recovery rates achieved may not be the same as currently anticipated. Any material reduction in the estimated Mineral Resources and Mineral Reserves could have a material adverse effect on the Company's business, financial condition and results of operations. A significant decrease in the Mineral Resource and Mineral Reserve estimates could adversely impact the carrying value of exploration and evaluation assets, mine properties, property, plant and equipment, depletion and depreciation charges, and rehabilitation provisions, and could result in an impairment of the carrying value.

#### **Inferred Mineral Resources**

Inferred Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Due to the uncertainty which may be attached to Inferred Mineral Resources, there can be no assurance that Inferred Mineral Resources will be upgraded to Proven and Probable Mineral Reserves as a result of continued exploration.

#### **Need for Mineral Reserves**

As mines have limited lives based on Proven and Probable Mineral Reserves, the Company must continually develop, replace and expand its Mineral Reserves as its mines produce gold, silver and copper concentrates. The Company's ability to maintain or increase its annual production of gold, silver and copper and its aggregate Mineral Reserves will be significantly dependent on its ability to expand Mineral Reserves both at its existing mines and new mines it intends to bring into production in the future.

#### **Exploration**

Exploration is speculative and involves many risks that even a combination of careful evaluation, experience and knowledge utilized by the Company may not eliminate. Once a site with gold or other precious metal mineralization is discovered, it may take several years from the initial phases of drilling until production is possible. Substantial expenditures are normally required to locate and establish Mineral Reserves and to permit and construct mining and processing facilities. While the discovery of an ore body may result in substantial rewards, few properties that are explored are ultimately developed into producing mines.

#### Foreign Country and Political

The majority of the Company's operations and business are outside of Canada, primarily in Eastern Europe and southern Africa, and as such, the Company's operations are exposed to various political and other risks and uncertainties.

These risks and uncertainties vary from country to country and include, but are not limited to, terrorism; corruption; crime; hostage taking or detainment of personnel; military repression; extreme fluctuations in foreign currency exchange rates; high rates of inflation; labour unrest; the risks of war or civil unrest; expropriation and nationalization; renegotiation or nullification of existing concessions, licenses, permits and contracts; absence of reliable rule of law, regulatory and judiciary processes; illegal mining; changes in taxation or royalty policies; restrictions on foreign exchange and movements of capital; changing political conditions; inappropriate laws and regulations; and governmental regulations that favour or require the awarding of contracts to local contractors or require foreign contractors to employ citizens of, or purchase supplies from, a particular jurisdiction.

Other risks include the potential for fraud and corruption by suppliers, Company personnel or government officials which could implicate the Company, compliance with applicable anti-corruption laws, including the Canadian *Corruption of Foreign Public Officials Act* ("CFPOA") by virtue of the Company operating in jurisdictions that may be vulnerable to the possibility of bribery, collusion, kickbacks, theft, improper commissions, facilitation payments, conflicts of interest and related party transactions and the Company's possible failure to identify, manage and mitigate instances of fraud, corruption, or violations of its code of conduct and applicable regulatory requirements. Although the Company has adopted a formal Anti-Bribery and Anti-Corruption policy, for which training has been provided to those employees who are employed in areas of the business that are deemed to be higher risk, there can be no assurance that these measures will prevent or detect the occurrence of a corrupt act, which could adversely impact the Company's business, financial condition and results of operation.

Any changes in mining or investment policies or shifts in political attitude in the countries in which the Company conducts its business and operations may adversely affect the Company's business, financial condition and results of operations.

The Company also currently conducts mining, development and exploration activities in countries with developing economies. It is difficult to predict the future political, social and economic direction of the countries in which the Company operates, and the impact government decisions could have on its business. Any political or economic instability in the countries in which the Company currently operates could adversely impact the Company's business, financial condition and results of operations.

In addition, authorities and court systems in the countries in which the Company conducts its business and operations may be unpredictable. Challenges to foreign asset ownership, operations and regulatory compliance may be brought by government authorities for reasons that cannot be predicted and that may not be motivated by substantive law. It is also not unusual, in the context of a dispute resolution, for a party in these foreign jurisdictions to use the uncertainty of the legal environment as leverage in its business negotiations.

Failure to comply with applicable laws, regulations and local practices relating to mineral right applications and tenure could result in loss, reduction or expropriation of entitlements.

#### Risks with Respect to Inadequate Controls over Financial Reporting

The Company assessed and tested its internal control procedures in order to satisfy the requirements of NI 52-109, which require an annual assessment by management of the operating effectiveness of the Company's internal control over financial reporting. The Company's failure to satisfy the requirements of NI 52-109 on an ongoing and timely basis could result in the loss of investor confidence in the reliability of its financial statements, which in turn could adversely impact the Company's business and share price. In addition, any failure to implement required new or improved controls, or difficulties encountered in their implementation, could adversely impact the Company's financial results, results of operations and share price.

No evaluation can provide absolute assurance that the Company's internal control over financial reporting will detect or uncover all material information required to be reported. Furthermore, there can be no certainty that the Company's internal control over financial reporting will prevent or detect all errors and fraud. In addition, with ever increasing regulations and changes in the Company's business it is expected that the Company's internal control over financial reporting will continue to evolve and improve over time.

# Community Relations and License to Operate

The Company's relationship with the host communities where it operates is critical to ensure the future success of its existing operations and the construction and development of its projects. There is an increasing level of public concern relating to the perceived effect of mining and smelter activities on the environment and on communities impacted by such activities. Certain non-governmental organizations ("NGOs") and civil society groups, some of which oppose globalization and resource development, are often vocal critics of the mining industry and its practices, including the use of hazardous substances and the handling, transportation and storage of various waste, including hazardous waste. Adverse publicity generated by such NGOs and civil society groups or others related to the extractive industries generally, or the Company's operations specifically, could have adverse effects on, including but not limited to, the laws under which the Company operates, its ability to secure new permits and its reputation. Reputation loss may result in decreased investor confidence, increased challenges in developing and maintaining community relations and an impediment to the Company's overall ability to

advance its projects and/or continue its operations, which could have a material adverse impact on the Company's business, results of operations and financial condition.

#### **Development Projects**

As part of the Company's growth strategy, it expects to invest in the development, design, construction, operation and optimization of existing and new facilities to enhance operations and increase future production. In developing these new projects, the Company may be required to incur significant preliminary engineering, environmental, permitting and legal-related expenditures prior to determining whether a project is technically feasible and economically viable. The commercial viability of development projects is based on many factors, including: in the case of a mine, the particular attributes of the deposit, such as size, grade and proximity to infrastructure; metal recoveries, metal prices and, in the case of the smelter, toll rates, each of which are highly cyclical; availability of complex concentrate; government regulations; capital and operating costs of such projects; and foreign currency exchange rates. Development projects are also subject to the successful completion of feasibility studies, issuance of necessary governmental permits, subsequent appeals of such permits, including favourable EIA decisions, the acquisition of satisfactory surface or other land rights and having adequate funding arrangements in place.

All projects are approved for development on a project-by-project basis after considering its strategic fit, inherent risks, and expected financial returns. This approach, which incorporates a gated project governance model, and combined with an experienced management team, staff and contract personnel, mitigates some of the risk associated with development projects. However, there can be no assurance that there will not be delays in obtaining the necessary permits or that the development or construction of any one or more projects will be completed on time, on budget or at all, or that the ultimate operating cost of the operation will not be higher than originally envisaged. In addition, to secure long lead times required for ordering equipment, the Company may place orders for equipment and make deposits thereon or advance projects before obtaining all requisite permits and licenses. Such actions are taken only when the Company reasonably believes such licenses or permits will be forthcoming prior to the requirement to expend the full amount of the purchase price. In the event a project, which was deemed economically viable, is not completed or does not operate at anticipated performance levels, the Company may be unable to fully recover its investment and be required to record a write-down. This, in turn, may adversely affect the Company's business, results of operations and financial condition.

It is not unusual in the mining industry, especially in a jurisdictions like Bulgaria and Namibia, for operations to experience construction challenges or delays and unexpected problems during the start-up phase, resulting in delays and requiring more capital than anticipated. Given the inherent risks and uncertainties associated with any major capital project, there can be no assurance that construction will proceed in accordance with current expectations or at all, or that construction costs will be consistent with the budget, or that the operation will operate as planned.

# Risks Related to Construction and Start-up of Krumovgrad

The Company presents estimates with respect to capital costs, operating costs and other project economics with respect to the Krumovgrad Gold Project. The Company's actual costs, production, returns, payback and other financial and economic performance metrics for the Krumovgrad Gold Project are dependent on a number of factors, including currency exchange rates, the price of gold and by-product metals, the cost of inputs used in mining development and operations and events that impact cost and production levels that are not in the Company's control. DPM's actual costs may vary from estimates for a variety of reasons, including changing waste-to-ore ratios, ore grade metallurgy, labour and other input costs, commodity prices, general inflationary pressures and currency exchange rates. Failure to achieve cost estimates or other economic performance metrics or material increases in costs could have an adverse impact on DPM's future cash flows, profitability, results of operations and financial condition. As a result of the substantial expenditures involved in development projects, development projects are prone to material cost overruns versus budget. The capital expenditures and time required to develop new mines are considerable and changes in cost or construction schedules can significantly increase both the time and capital required to build the project. It is not unusual for new mining operations to experience construction challenges or delays and unexpected problems during the start-up phase, including failure of equipment, machinery, the processing circuit or other processes to perform as designed or intended, inadequate water, insufficient ore stock pile or grade, and failure to deliver adequate tonnes of ore to the mill, any of which could result in delays, slowdowns or suspensions and require more capital than anticipated. Given the inherent risks and uncertainties associated with the development of a new mine, there can be no assurance that the construction will continue in accordance with current expectations or at all, or that construction costs will be consistent with the budget, or that the mine will operate as planned.

# Competition

The Company faces competition from other mining companies in connection with the acquisition of properties producing, or capable of producing, precious and base metals, as well as the ultimate sale of its production. Many of these companies have greater financial resources, operational experience and technical capabilities than the Company. As a result of this competition, there can be no assurance that the Company will be able to acquire or maintain attractive operations or sell its production on economically acceptable terms. Consequently, the Company's business, results of operations and financial condition could be adversely affected.

The Company also faces competition from other smelting companies as well as trading companies, notably those with blending operations, to secure complex feed for its Tsumeb smelter operation. Such competitive forces and supply-demand dynamics could cause terms for complex copper concentrate to fall below levels at which it is economic for the Company to smelt this material. Consequently, the Company's business, results of operations and financial condition could be adversely affected.

#### **Enforcement of Legal Rights**

The Company's material subsidiaries are organized under the laws of foreign jurisdictions. Given that the Company's material assets are located outside of Canada, investors may have difficulty in effecting service of process within Canada and collecting from or enforcing against the Company, any judgments obtained by the Canadian courts or Canadian securities regulatory authorities and predicated on the civil liability provisions of Canadian securities legislation or otherwise. Similarly, in the event a dispute arises from the Company's foreign operations, the Company may be subject to the exclusive jurisdiction of foreign courts or may not be successful in subjecting foreign persons to the jurisdictions of courts in Canada. See "Other Disclosure Related to OSC Requirements for Companies Operating in Emerging Markets" in the AIF.

#### **Insurance and Uninsured Risks**

The Company's business is subject to numerous risks and hazards, including severe climatic conditions, industrial accidents, equipment failures, labour disputes, unusual or unexpected geological conditions, ground or slope failures, cave-ins, changes in the regulatory environment and other natural events such as earthquakes. Such occurrences could result in damage to mineral properties or processing facilities, personal injury or death, environmental damage to the Company's properties or the properties of others, delays in mining and processing, monetary losses and possible legal liability.

In order to eliminate or reduce certain risks, the Company purchases and maintains insurance coverage, subject to limits and deductibles that are considered reasonable and prudent. This insurance coverage does not cover all potential risks because of customary exclusions and/or limited availability, and in some instances, the Company's view that the cost of certain insurance coverage is excessive in relation to the risk or risks being covered. Further, there can be no assurance that insurance coverage will continue to be available on commercially reasonable terms, that such coverage will ultimately be sufficient, or that insurers will be able to fulfill their obligations should a claim be made. Losses arising from any such events that are not fully insured may cause the Company to incur significant costs that could have a material adverse effect on its business, financial condition and results of operations.

# Value of Investment Portfolio

The value of the Company's investment portfolio of securities will vary based on the underlying value of the securities acquired by the Company. The business activities of issuers in the resource industry ("Resource Issuers") are speculative and may be adversely affected by factors outside the control of those issuers. Resource Issuers may not hold or discover commercial quantities of precious metals or minerals, have limited access to capital, and profitability may be affected by adverse fluctuations in commodity prices, demand for commodities, general economic conditions and cycles, unanticipated depletion of reserves or resources, native land claims, liability for environmental damage, competition, imposition of tariffs, duties or other taxes and government regulations, as applicable. Because the Company has and may continue to invest primarily in securities issued by Resource Issuers engaged in the mining industry or related resource businesses (including junior issuers), the value of the Company's investment portfolio of securities may be more volatile than portfolios with a more diversified investment focus. In some cases, the value of securities owned by the Company may also be affected by such factors as investor demand, specified rights or restrictions associated with the security, general market trends or regulatory restrictions. Fluctuations in the market values of such securities may occur for a number of reasons beyond the control of the Company, and there can be no assurance that an adequate liquid market will exist for securities or that quoted market prices at any given time will properly reflect the value at which the Company could monetize these securities.

# **Government Laws and Regulations**

The activities of the Company are subject to various laws governing prospecting, development, production, taxes, labour standards and occupational health, mine safety, toxic substances, land use, water use, land claims of local people, archaeological discovery and other matters. Although the Company currently carries out its operations and business in accordance with all applicable laws, rules and regulations, no assurance can be given that new laws, rules and regulations will not be enacted or that existing laws, rules and regulations will not be changed or be applied in a manner which could limit or curtail production or development. Furthermore, amendments to current laws and regulations governing operations and activities of mining, milling and processing or more stringent implementation thereof could cause costs and delays that will have a material adverse impact on the results of operations and financial condition of the Company.

The Company's current and future operations and development activities are subject to receiving and maintaining permits from appropriate governmental authorities. Although the Company currently has the required permits for its current operations, there can be no assurance that delays will not occur in connection with obtaining all necessary renewals of such permits for the existing operations or additional permits for planned new operations or changes to existing operations.

#### **Labour Relations**

While the Company has good relations with both its unionized and non-unionized employees, there can be no assurance that it will be able to maintain positive relationships with its employees or that new collective agreements will be entered into without work interruptions. In addition, relations between the Company and its employees may be impacted by regulatory or governmental changes introduced by the relevant authorities in whose jurisdictions the Company carries on business. Adverse changes in such legislations or in the relationship between the Company and its employees could have a material adverse impact on the Company's business, results of operations and financial condition.

A two-year collective agreement with the Company's unionized employees at Chelopech is in force from July 1, 2015 to July 1, 2017. An agreement was also reached with the Company's unionized employees at the smelter and is in force until March 2018.

#### **Income Tax**

The Company operates in Canada and several foreign jurisdictions, through a number of subsidiary intermediary entities, and in some instances may utilize inter-company interest-bearing and non-interest bearing debt. As a result, it is subject to potential changes in tax laws, judicial interpretations in respect thereof, and the administrative and/or assessing practices of tax authorities in each jurisdiction. While these tax risks are proactively managed and monitored by senior management and outside tax experts, there can be no assurance that there will not be tax changes or rulings that could adversely affect the Company's business, financial condition and results of operations.

The Company believes that it is not currently a passive foreign investment company ("PFIC") for U.S. Federal income tax purposes and it does not anticipate becoming a PFIC in the foreseeable future. However, the PFIC rules are complex, and, as a Canadian company publicly listed on the Toronto Stock Exchange ("TSX"), the Company does not operate its business in a manner specifically intended to avoid being classified as a PFIC. Accordingly, there can be no assurance that the Company will not be considered a PFIC. The Company also has not and does not expect to provide any shareholder with information that will enable a U.S. shareholder to make a qualified electing fund election in respect of the Company. To the extent that the Company is a PFIC in respect of any taxable year, its status as such would have adverse tax consequences for taxable U.S. investors. U.S. investors should consult their own tax advisors regarding the PFIC rules and the potential adverse U.S. Federal income tax consequences to which they may be subject in respect of an investment in the Company's common shares.

#### **Future Plans**

As part of its overall business strategy, the Company examines, from time to time, opportunities to acquire and/or develop new mineral projects and businesses. A number of risks and uncertainties are associated with these potential transactions and DPM may not realize all of the anticipated benefits. The acquisition and the development of new projects and businesses are subject to numerous risks, including the particular attributes of the deposit, political, regulatory, design, construction, labour, operating, technical, and technological risks, as well as uncertainties relating to the availability and cost of capital, future metal prices, foreign currency rates and toll rates, in the case of the smelter. Failure to successfully realize the anticipated benefits associated with one or more of these initiatives successfully could have an adverse effect on the Company's business, financial condition and results of operations.

#### **Land Title**

Although the title to the properties owned by the Company were reviewed by, or on behalf of, the Company, there can be no assurances that there are no title defects affecting such properties or the shares of subsidiaries that hold such properties. Title insurance generally is not available, and the Company's ability to ensure that it has obtained a secure claim to individual mineral properties or mining concessions may be severely constrained. The Company has not conducted surveys of the claims in which it holds direct or indirect interests and, therefore, the precise area and location of such claims may be in doubt.

Accordingly, the Company's interest in mineral properties may be subject to prior unregistered liens, agreements, transfers or claims, and title may be affected by, among other things, undetected defects. In addition, the Company may be unable to operate its properties as permitted or to enforce its rights with respect to its properties.

# **Market Price of Common Shares**

The Common Shares are listed on the TSX. The price of these and other shares making up the mining sector have historically experienced substantial volatility, often based on factors unrelated to the financial performance or prospects of the companies involved. These factors include macroeconomic developments in North America and globally, including those impacting the price of commodities, interest rates, market perceptions concerning equity securities generally and the precious and base metal sectors in particular, and factors that may be specific to the Company, including daily traded volumes of the Common Shares.

As a result of any of these factors, the market price of the Common Shares at any given point in time may not accurately reflect the Company's long-term value, which in turn could impact the ability of the Company to raise equity on terms considered to be acceptable. Securities class action litigation often has been brought against companies following periods of volatility in the market price of their securities. The Company may in the future be the target of similar litigation.

Securities litigation could result in substantial costs and damages and divert management's attention and resources and have an adverse effect on the Company's business, financial condition and results of operations.

#### **Dilution to Common Shares**

During the life of the Company's outstanding stock options granted under its share based compensation plans, the holders are given an opportunity to profit from an increase in the market price of the Common Shares with a resulting dilution in the interest of shareholders. The holders of stock options may exercise such securities at a time when the Company may have been able to obtain any needed capital by a new offering of securities on terms more favourable than those provided by the outstanding rights. The increase in the number of Common Shares in the market, if all or part of these outstanding rights were exercised, and the possibility of sales of these additional shares may have a negative effect on the price of the Common Shares.

The Company may need to raise additional financing in the future through the issuance of additional equity securities. If the Company raises additional funding by issuing additional equity securities, such financings may substantially dilute the interests of shareholders of the Company and reduce the value of their investment in the Company's securities.

#### **Anti-Corruption Laws**

The Company's operations are governed by, and involve interactions with, many levels of government in numerous countries. Its operations take place in jurisdictions ranked unfavourably under Transparency International's Corruption Perception Index. The Company is required to comply with anti-corruption and anti-bribery laws, including the CFPOA, as well as similar laws in the countries in which the Company conducts its business. In recent years, there has been a general increase in both the frequency of enforcement and the severity of penalties under such laws, resulting in greater scrutiny and punishment to companies convicted of violating anti-corruption and anti-bribery laws. Furthermore, a company may be found liable for violations by not only its employees, but also by its contractors and third party agents. Although the Company has adopted steps to mitigate such risks, including the implementation of training programs, internal monitoring, reviews and audits, due diligence, and policies to ensure compliance with such laws, such measures may not always be effective in ensuring that the Company, its employees, contractors or third party agents will comply strictly with such laws. If the Company finds itself subject to an enforcement action or is found to be in violation of such laws, this may result in significant penalties, fines and/or sanctions imposed on the Company resulting in a material adverse effect on the Company's reputation, business, financial condition and results of operations.

#### **Information Systems Security Threats**

DPM has entered into agreements with third parties for hardware, software, telecommunications and other information technology ("IT") services in connection with its operations. The Company's operations depend, in part, on how well the Company and its suppliers protect networks, equipment, IT systems and software against damage from a number of threats, including, but not limited to, cable cuts; damage to physical plants; natural disasters; terrorism; fire; power loss; hacking; computer viruses; vandalism and theft. The Company's operations also depend on the timely maintenance, upgrade and replacement of networks, equipment, IT systems and software to mitigate the risk of failures. Any of these and other events could result in information loss, system failures, business interruptions and/or increases in capital expenses, which could adversely impact the Company's reputation, business, financial condition and results of operations.

Although to date the Company has not experienced any material losses relating to cyber-attacks or other information security breaches, there can be no assurance that DPM will not incur such losses in the future. The Company's risk and exposure to these matters cannot be fully mitigated because of, among other things, the evolving nature of these threats. As a result, cyber security and the continued development and enhancement of controls, processes and practices designed to protect systems, computers, software, data and networks from attack, damage or unauthorized access remain a priority. As cyber threats continue to evolve, the Company may be required to expend additional resources to continue to modify or enhance protective measures or to investigate and remediate any security vulnerabilities.

#### **Interest Rate**

The Company's exposure to the risk of changes in market interest rates relates primarily to the Company's cash and cash equivalents, floating rate denominated long-term debt, revolver line of credit and finance lease obligations, the majority of which have associated cash flows based on floating interest rates.

#### Climate Change Risks

Many governments are moving to enact climate change legislation and treaties at the international, national, state, provincial and local levels. Where legislation already exists, regulations relating to emission levels and energy efficiency are becoming more stringent. Some of the cost associated with meeting more stringent regulations can be offset by increased energy efficiency and technological innovation. However, if the current regulatory trend continues, meeting more stringent regulations is anticipated to result in increased costs, which could have a material adverse impact on the Company's business, results of operations and financial condition.

#### Foreign Subsidiaries

The Company conducts its operations through foreign subsidiaries and substantially all of its assets are held in such entities. Accordingly, any limitation on the transfer of cash or other assets between or among DPM and such entities, could restrict or impact the Company's ability to fund or receive cash from its operations. Any such limitations, or the perception that such limitations may exist now or in the future, could have an adverse impact on the Company's business, financial condition and results of operations. In addition, the corporate law and other laws governing the Company's foreign subsidiaries differ materially from Canadian corporate and other laws. Challenges to the Company's ownership or title to the shares of such subsidiaries or the subsidiaries' title or ownership of their assets may occur based on alleged formalistic defects or other grounds that are based on form rather than in substance. Any such challenges may cost time and resources for the Company or cause other adverse effects.

#### **Key Executives and Senior Personnel**

The Company is dependent on the services of key executives, including its President and CEO and a number of highly skilled and experienced executives and senior personnel. The loss of these persons or the Company's inability to attract and retain additional highly skilled employees could adversely affect its business and future operations.

#### **Conflicts of Interest**

Certain of the directors and officers of the Company also serve as directors and/or officers of other companies involved in natural resource exploration and development or investment in or provide services to natural resource companies and consequently there exists the possibility for such directors and officers to be in a position of conflict. The Company expects that any decision made by any of such directors and officers will be made in accordance with their duties and obligations to deal fairly and in good faith with a view to the best interests of the Company and its shareholders, but there can be no assurance in this regard. In addition, each of the directors is required to declare and refrain from voting on any matter in which such directors may have a conflict of interest in accordance with the procedures set forth in the CBCA and other applicable laws.

#### Significant Shareholder

Dundee Corporation owns approximately 20.4% of the Common Shares. As a result, Dundee Corporation has the ability to significantly influence the outcome of corporate actions requiring shareholder approval, including the election of directors of DPM and the approval of certain corporate transactions.

#### **Public Company Obligations**

The Company's business is subject to evolving corporate governance and public disclosure regulations that have increased both the Company's compliance costs and the risk of non-compliance, which could adversely impact the Company's share price.

The Company is subject to changing rules and regulations promulgated by a number of governmental and self-regulated organizations, including the Canadian Securities Administrators, the TSX, and the International Accounting Standards Board. These rules and regulations continue to evolve in scope and complexity creating many new requirements. The Company's efforts to comply with rules and obligations could result in increased general and administration expenses and a diversion of management time and attention from revenue-generating activities.

# **MINING PROPERTIES**

#### Chelopech Mine, Chelopech, Bulgaria

The following summary and technical information of the Chelopech mine is derived in part from, and in some cases, includes direct extracts of the Chelopech 2016 Technical Report, which has been filed on the SEDAR website at www.sedar.com. See "Technical Information" for further details.

# **Project Description, Location, and Access**

Chelopech is an operating underground gold-copper mine which produces copper and gold contained in a concentrate grading between 15% and 17% Cu, 20 to 30g/t Au and approximately 5.5% As. The high arsenic content of the copper minerals (enargite and tennantite) in the concentrate requires special arsenic recovery systems during the downstream smelting processes. Since 2010, the majority of the concentrate produced has been transported to the Company's smelter, in Namibia, which has the required treatment facilities and, since 2014, part of the copper concentrate production has been sold to XGC.

Chelopech also produces a pyrite concentrate which was designed to capture a portion of the unrecovered gold contained in the pyrite that was previously going into the tailings management facility ("TMF"). From 2014 to 2016, Chelopech sold pyrite concentrate containing 96,050 ounces of payable gold.

The Chelopech mine is situated adjacent to the Chelopech village, in the Sofia District of Bulgaria, 75 km east of the capital of Sofia. It is situated approximately 350 km to the west by road and rail from the Black Sea ports of Bourgas and Varna.

Chelopech is located at the foot of the Balkan Mountains, at an elevation of approximately 700 metres ASL. The infrastructure area is bounded to the north by the foothills of the Balkan Range, to the east by a government-owned road maintenance organization and residential housing and agricultural land to the west and south, respectively.

Chelopech lies at the base of a range of hills on gently undulating terrain. The plant site is located at approximately 730 metres ASL while the ranges of hills which form a backdrop to the plant site rise to over 1,000 metres ASL.

The Chelopech Mine is easily accessible via major sealed roads from Sofia. The principal rail and road links between Sofia and the country's largest port, Bourgas, which is located on the Black Sea, pass through the village of Chelopech and the Chelopech Mine site.

The mining license covers the concession area of 452 hectares, which consists of the deposit area and additional area necessary for implementation of the mining activities, including the area of the TMF.

# Royalties

The royalty is fixed at a rate of 1.5% of the value of the gross copper, gold and silver metals contained in the ore mined during the period.

# **Permitting**

DPMC owns the land upon which the facilities are constructed and operates the Chelopech mine based on a concession contract entered into in May 1999 where the concession rights were granted for a period of 30 years.

Mining and processing activities are carried out based on an LOM and Annual Production Plans ("APP"), Overall Closure and Rehabilitation Plan ("OCRP") and Annual Closure and Rehabilitation Plan ("ACRP") where the operating activities for each specific year are described in detail. These plans require approval by the Ministry of Energy.

The 2017 APP and 2017 ACRP were approved in December 2016. The updated OCRP was approved in December 2015.

Tailing management facilities should be operated based on an approved Mine Waste Management Plan ("MWMP"). Further, operators of class A mine waste management facilities require a permit, which should be issued based on the approved MWMP. As an operator of a class A facility, DPMC has an approved MWMP, last updated in November 2013 and a permit, issued in June 2015.

In September 2016, DPMC notified the Regional Inspectorate of Environment and Water Sofia and the municipalities Chelopech and Chavdar of the investment proposal "TMF Chelopech 630 level upgrade". The environmental permitting process will continue in 2017 and will be followed by the purchase of the required land.

Finally, the day-to-day company activities require a number of specific permits, which the Company maintains on an ongoing basis. These can be grouped in three categories: water use and discharge, blasting activities and general waste treatment. All permits required in order to maintain the continuity of the business have been obtained and are up to date as of the date hereof.

# **Environmental Liabilities**

To the Company's knowledge, there are no additional environmental liabilities to the property other than those associated with the existence of the current mining infrastructure, namely the underground mine, processing plant, flotation TMF, ancillary workshops and administration facilities. In December 2015, the Company received confirmation of acceptance from the Bulgarian Ministry of Energy of an updated closure and rehabilitation plan. In February 2016, the financial guarantee amount for closure and rehabilitation was modified to align with the updated plan.

#### **Closure and Rehabilitation**

A mine closure plan was filed by DPMC, and approved by the MoEET and the MoEW on April 15, 2010 and May 21, 2010, respectively, with the intent to ensure sustainable development for the region. In compliance with its obligations under its Concession Contract, DPMC initially established a \$25 million insurance policy/performance bond to ensure the performance of its obligations for the closure and rehabilitation of the Chelopech operations. This bond was replaced in 2012 with a bank guarantee.

In December 2015, an updated mine closure plan with a revised value of \$15 million was approved and a bank guarantee for this amount was obtained. The reduction of the value results from improvements made to the plan for the rehabilitation of the surface caves and replacement of the fill material, as well as a lower cost for the rehabilitation of the TMF due to the effects caused by the implementation of the thickened tailings deposition.

# History

- The mine started production in 1954. The mine, then part of several state-owned enterprises, was fully operational between 1970 and 1990 producing bulk copper-gold and pyrite concentrates.
- Production as a state-owned company reached 100,000 tpa of ore processed in 1971.

- Production quadrupled in 1976 following an expansion program and construction of a new concentrator, peaking at 512,000 tpa of ore processed in 1988, before trailing off rapidly between 1990 and 1992.
- Prior to 1990, the nearby Aurubis (formerly MDK Pirdop) copper smelter, located 7 km east of Chelopech, accepted the bulk sulphide concentrates from Chelopech and blended them with cupriferous concentrates from the nearby Elatsite, Medet and Assarel mines.
- The relatively high arsenic content of the concentrates led to the Bulgarian Government decreeing on April 1, 1990
  that Chelopech concentrate could no longer be treated at the Aurubis smelter, unless arsenic capturing and
  treatment facilities were installed at the smelter.
- In February 1992, the mine was placed on care and maintenance.
- In 1994, operations were restarted by Navan Bulgarian Mining BV, a Dutch registered subsidiary of Navan Mining plc ("Navan"), with the re-treatment of approximately 100,000 tonnes of stockpiled low-grade concentrate.
- Following a number of ownership changes over the next five years, in 1999, the CoM and Chelopech signed a concession agreement for the extraction of gold-copper ores from the mine, and the company name was changed to Navan Chelopech AD (Navan).
- Ore treated at Chelopech between 1994 to the end of 2002 is estimated at 4.8Mt at an average grade of 1.4% Cu and 3.9g/t Au.
- Navan operated the Chelopech mine until late 2002, when it went into receivership, following which operations continued under the direct control of an administrator appointed by Deutsche Bank AG of London.
- The mining operations were acquired by DPM in 2003.

See "Operations of the Company - Three Year Production History" for a summary of Chelopech mine production.

# **Geological Setting**

The Chelopech deposit is located within the Panagyurishte metallogenic district. It was formed during Late Cretaceous magmatic-hydrothermal events, defined by a north-northwest alignment of porphyry Cu-Au (Elatsite, Assarel and Medet) and epithermal Cu-Au deposits that is oblique to the east-west orientation of the Srednogorie belt.

The geology of the Panagyurishte metallogenic district comprises a basement of Precambrian granitoid gneisses intruded by Palaeozoic granites and overlain by Late Cretaceous magmatic and sedimentary sequences. In some parts of the district, these rocks are overlain by Late Cretaceous flysch and by Palaeogene and Neogene molasse.

The basement rocks form a series of uplifted horst-anticlinal structures between which a series of three north to east trending sub-parallel grabens contain the Cretaceous sequences

# **Mine Geology**

The Chelopech area consists of pre-mineral and post-mineral sequences that are separated by a Late Turonian erosional surface. The pre-mineral formation consists of the following units (from oldest to youngest): 1) high and low-grade metamorphic complexes that are separated by a Variscan ductile shear zone and form the *Paleozoic Basement unit*; 2) the *Basal Turonian unit* of quartz-rich sandstones and conglomerates deposited in a shallow-marine setting, and; 3) the *Turonian Magmatic Chelopech Mine Formation*, a shallow porphyritic diorite/microdiorite intrusive system that is pierced by a number of vertically-extended breccia pipes and at least one surface-reaching diatreme.

The post-mineral formation consists of the following units (from oldest to youngest): 1) Monolithic Rock-Avalanche Breccia unit indicating tectonic subsidence and made up of angular to sub-angular debris-flows deposits which are locally distributed; 2) the Two Mica Sandstone unit represented by thick-bedded to massive sandstones to gravelly, rare pebble sandstones of Santonian age that are interpreted as high-density sandy turbidites indicating redeposition of terrigenous material over a short time period; 3) the Polylithic Breccia unit made up of high-density epiclastic flows deposits; 4) the Limestone unit (Mirkovo Limestone Formation) represented by Late Santonian-Early Campanian thin-bedded to massive limestones and interpreted as marking the post-rift stage of the basin system; 5) the "Flysch" unit (Chugovitsa Formation) composed of Santonian – Late Maastrichtian thin to thick-bedded, low to high-density sandy and muddy turbidites and; 6) the Quaternary Zlatitsa Graben unit that developed due to extension reactivation of older structures in the southern part of Chelopech area.

The overall structural complexity of the Chelopech area is interpreted as a result of pre-existing fabrics, faults and weak structural zones in the basement that were intermittently reactivated. Recent detailed structural mapping at surface and reinterpretation of key sections suggest the entire sequence is split by an imbricate thrust (the Chelopech thrust fault) into a structurally less complex autochthon in the footwall of the fault, and a complex allochthon in the hangingwall. Other important structures around the mine include syn-sedimentary faults in the post-mineral cover sequence and numerous late N-S and E-W striking normal faults. The Petrovden fault is one of the main E-W striking normal faults. It juxtaposes premineral phyllic-altered rocks of the deeper part of the Chelopech intrusive complex in the north against unaltered post-mineral epiclastic rock units and sedimentary cover in the south and has a normal vertical dislocation of hundreds of metres.

The Chelopech deposit was previously interpreted to be hosted by the Chelopech andesitic strato-volcanic sequence that formed in a subaqueous environment. Continuous efforts to check and improve this model, including a re-logging program that started in 2014, resulted in a new geological model with the ore-hosting magmatic environment dominated by a multiphase intrusive complex that is pierced by several vertically-extended intrusion-related breccias bodies. These bodies include numerous blind breccia-pipes and at least one large surface-reaching maar-diatreme (i.e. phreatomagmatic explosive) eruptive center.

The high sulfidation system is localized within the diatreme system that is intruded by tuffisite and porphyry dikes. The high-sulphidation mineralization occurs within sulphide and sulphosalt-rich zones of replacement silicification surrounded by haloes of advanced argillic alteration. The ore bodies, both complex branched hydrothermal breccia bodies and discrete pipes, vary from 150-300 metres in length, are 30-120 metres thick and can extend at least 350 metres down plunge. The main ore bodies are spatially grouped into two mining areas, with semi-circular distribution that are thought to be controlled by favorable breccia and host rock contact zones and structure intersections within the breccias. The Central zone consists of seven mineralized ore blocks (16, 17, 18, 19E, 19W, 10 and 8), whilst the Western zone comprises a further eight ore blocks (5, 25, 103, 145, 147, 149, 150, and 151) and the new Zone 153).

#### **Mineral Reserve and Mineral Resource Estimates**

See "Summary of Mineral Reserve and Mineral Resource Estimates" for the Chelopech Mineral Reserves and Mineral Resources. The December 31, 2016 Mineral Reserves and Resources were estimated by DPMC personnel under the supervision of CSA. Validation of the Mineral Resource Estimate was also completed by CSA.

Mineral Reserves and Mineral Resources have been classified in accordance with the guidelines defined in the CIM Standards dated May 10, 2014, as adopted under NI 43-101.

Mineral Resources and Mineral Reserves are based on a cutoff grade of 3 g/t AuEq, where AuEq = 2.06\*Cu + Au, as well as a profitability indicator that considers, among other things, metal price, metallurgical recoveries, treatment charges and market forecasts. Long term metal prices assumed for the evaluation of the Mineral Reserves and Mineral Resources are \$1,250/oz for Au, \$23.00/oz for Ag and \$2.75/lb for Cu.

Mineral Resources exclusive of Mineral Reserves, in comparison to the end-of-year 2015 Mineral Resource estimate, have decreased 11% in tonnes, 9% in metal content for gold, 9% in metal content for copper and 13% in metal content for silver, within the Measured and Indicated Mineral Resource categories of the Mineral Resource inventory. This decrease in Measured and Indicated Mineral Resources is largely attributed to the depletion of newly discovered mining voids, which can be traced to historic mining activity at Chelopech Mine approximately 30 - 40 years ago. These voids were subsequently digitally captured and have been used to deplete the mineral resource model. Additionally the decrease can be credited to the re-interpretation of the high grade solids in the upper levels, in light of the newly discovered historic mining and changes to the profitability calculation, which now includes additional costs attributed to LOM sustaining capital and revised treatment charges.

Inferred Mineral Resources have decreased by 37% in tonnes, in comparison to the end-of-year 2015 Mineral Resource estimate. This decrease in the Inferred Mineral resource category is primarily due to the depletion of the historic voids, reinterpretation of some of the high grade domains in the upper levels and re-classification into higher Mineral Resource categories via means of ongoing infill and resource development drilling programs.

For the December 31, 2016 Mineral Reserves estimate, a cutoff grade of 3 g/t AuEq, in conjunction with the profitability test, was applied with designed stopes and development. The cutoff grade of \$10/t of ore profitability test continues to be based on the results presented by Coffey Geosciences Pty Ltd. in 2010, which was considered a reasonable cutoff grade that balances economic risk and mine life. The operating cost, excluding royalty, was estimated to be \$34.69/t and includes provision for sustaining capital requirements over the LOM.

A Geotechnical review of the Block 19 and 103 crown pillar mining strategy was completed in the fourth quarter of 2016 by SRK Consulting (UK) Limited ("SRK"). Based on SRK's assessment, sufficient geotechnical data has been collected in Blocks 19 and 103 during 2016. This has allowed Measured and Indicated Mineral Resources in proximity to historical cave zones to be considered in the current Mineral Reserve estimate for Blocks 19 and 103, between the 390 level and the 450 level. Resource and geotechnical core drilling will continue in 2017 to define the shape, extent and geotechnical characteristics of the rock mass within the crown pillar and surrounding the historical cave zones before consideration for conversion to Mineral Reserves in due course.

Net changes in tonnes and contained metals from the 2015 to the 2016 Mineral Reserves estimate show reductions of 1.7 million tonnes, 192,000 ounces of gold, 46 million pounds of copper and 549,000 ounces of silver. This corresponds to a percentage reduction of 8% in tonnes and 9% in metal content for gold, 10% in metal content for copper and 11% in metal content for silver. The decrease can be attributed to 2016 mining depletion, which has been partially offset by 0.5 Mt of additional reserves from Blocks 19 and 103 above the 390 level.

The Mineral Reserves at Chelopech have been estimated by including a number of technical, economic and other factors. A change to any of the inputs would therefore have some effect on the overall results. Concerning mining and metallurgical factors, it is CSA's belief that sufficient work has been done by DPM to ensure that these are not likely to have any significant or material effect on Mineral Reserves.

Subject to the risk factors discussed under "Risk Factors" in this AIF and the more detailed information contained in the Chelopech 2016 Technical Report, DPM believes that the Mineral Reserve and Mineral Resource estimates for Chelopech are of low risk of being materially affected by environmental, permitting, legal, title, taxation, socio-economic, marketing, political, and other relevant issues.

#### **Mining Operations**

The operating facilities owned by the Company include an underground mine, SAG mill as well as copper and pyrite flotation circuits.

Other facilities include a fully operational tailings dam, underground crusher and conveyor system to surface, the original head frame and hoist for stand-by/emergency use, two primary ventilation shafts, a trackless decline from surface, paste fill plant, as well as surface and underground workshops. In the fourth quarter of 2014, the concentrate conveying and train load out facility was commissioned and in the third quarter of 2015, the copper concentrate storage facilities were completed. There are also sufficient surface buildings and installations necessary to support current and future operations of the mine. Refer to the Chelopech 2016 Technical Report for further details. See "Technical Information".

The production rate of the mine for the last three years has been approximately 2 Mtpa of ore and the designed throughput rate of the SAG mill is 250 tph of ore. In 2016, the mine processed over 2.2 million tonnes of ore, and produced 107,108 tonnes of copper concentrate, containing 118,428 ounces of gold, 227,673 ounces of silver and 17,445 tonnes of copper (38,458,797 pounds). In addition, 214,775 tonnes of pyrite concentrate were produced, containing 47,237 ounces of gold. See "Operations of the Company - Three Year Production" for further details.

The mine is expected to produce, in copper concentrate, a total of 1 million ounces of gold, 1.65 million ounces of silver and 147,201 tonnes of copper for the years 2017 through 2026.

The primary saleable product is a copper concentrate containing, on average, 16.5% Cu, 30 g/t Au, and 5.5% arsenic which is loaded at the mine site through a conveyor system from the stockpile into rail wagons and dispatched to the Port of Bourgas for sea transportation to the Company's smelter in Namibia and to XGC.

Since 2014, pyrite concentrate, containing gold, has been produced allowing the recovery of up to 400,000 tonnes of pyrite concentrate per year from the mill feed as a separate secondary concentrate product, in addition to the produced copper concentrate. The change required for the Pyrite Recovery included a new flotation, thickening and filtration installation in the existing mill facility. This stage required modest capital expenditure, and allowed the mine to produce saleable pyrite concentrate.

#### **Capital and Operating Costs**

# Capital

The expansion project for the Chelopech mine was completed in 2012 at an overall capital cost of \$171.2 million. The expansion project enabled the mine to achieve an ore processing rate of 2 Mtpa. Through optimization and increasing operational efficiencies, the company expects to achieve a throughput rate of 2.2 Mtpa from 2016 onward. The table below sets out estimated special projects capital, sustaining capital associated with ongoing operations for the life of the mine, as well as estimated closure costs. These costs are in current dollars without escalation, and, with respect to cash costs, net of by-product credits, and are based on a copper price of \$2.75/lb. The Base Exchange rate used for the evaluation of the project is USD 1.25/EUR.

# Capital Costs 2017-2025

| Item  | LOM (\$ Millions) |
|---|-------------------|
| Sustaining /Replacement Capital (2016 – 2025) | 78.4              |
| Other Project Capital                         | 13.8              |
| Closure Costs                                 | 18.0              |
| LOM Capital Expenditure                       | 110.2             |

#### **Operating Costs**

The average estimated annual site operating cost for the life of the mine is \$36.95 per tonne treated, as set out in the tables below:

# **Operating Costs - Copper Concentrate**

| Item  | Unit     | 2017 – 2025 |
|---|----------|-------------|
| On Site Cash Costs / tonne ore treated                  | \$/t ore | 36.40       |
| Off-site Cash Cost / tonne ore treated (1)              | \$/t ore | 43.32       |
| Total Cash Costs / tonne ore treated                    | \$/t ore | 79.72       |
| On and Off-Site Cash Costs after Cu Credits / oz Au (2) | \$/oz Au | 664         |
| On Site Cash Costs / oz Au <sup>(3)</sup>               | \$/oz Au | 413         |
| Off Site Cash Costs / oz Au (3)                         | \$/oz Au | 473         |
| Total Cash Costs / oz Au <sup>(3)</sup>                 | \$/oz Au | 886         |
| On Site Cash Costs / lb Cu (3)                          | \$/lb Cu | 0.91        |
| Off Site Cash Costs / lb Cu (3)                         | \$/lb Cu | 1.14        |
| Total Cash Costs / lb Cu (3)                            | \$/lb Cu | 2.05        |
| Mine  | \$/t ore | 14.63       |
| Concentrator  | \$/t ore | 9.07        |
| Services  | \$/t ore | 3.48        |
| General & Administration                                | \$/t ore | 6.43        |
| Royalty   | \$/t ore | 2.79        |
| Total   | \$/t ore | 36.40       |

<sup>(1)</sup> Represents treatment and refining charges, penalties, freight costs, and the value of non-payable metals related to copper concentrate deliveries, divided by volumes of ore processed.

#### **Operating Costs - Pyrite Concentrate**

| Item                                       | Unit     | 2016 – 2025 |
|--|----------|-------------|
| On Site Cash Costs / tonne ore treated (1) | \$/t ore | 0.55        |
| Off-site Cash Cost / tonne ore treated (2) | \$/t ore | 16.73       |
| Total Cash Costs / tonne ore treated       | \$/t ore | 17.28       |

Represents on site costs related specifically to the production of pyrite concentrate divided by volumes of ore processed.

# **Resource Development**

In 2016, an intensive underground resource development diamond drilling program of 44,294 metres was completed, comprising 21,572 metres of grade control drilling and 22,722 metres of extensional drilling, designed to replace and increase Mineral Resources and Mineral Reserves. The focus of this drilling has been on the 'Upper Levels' resource development drilling program, initiated by the Company in mid-2015, to delineate and upgrade Mineral Resources in proximity to the historically mined areas within the Chelopech mine, above the 390 level. The grades from material in this section of the mine are typically higher grade and are relatively more copper-rich than the average resource grade and were identified as an attractive target for drilling. Key mineralized zones targeted during the year were the upper levels of Blocks 150, 19 and 103 and 10. Holes drilled near historical cave zones were subject to a geotechnical assessment to understand the ground conditions for future mining.

<sup>(2)</sup> Represents on site and off site operating cash costs less by-product copper revenues divided by gold contained in copper concentrate.

<sup>(3)</sup> Gold and copper are accounted for as co-products.

<sup>(2)</sup> Represents treatment and refining charges, penalties, freight costs, and the value of non-payable metals related to pyrite concentrate deliveries, divided by volumes of ore processed.

Within other areas of the Chelopech mine, grade control drilling was conducted to verify the lower margins of Block 18, Block 19 and Block 150. Resource development drilling continued within Block 149 and an area to the south of it.

A significant new mineralized zone, named Zone 153, was intersected during drilling on the 440 level, during the fourth quarter of 2016. Zone 153 is located approximately 150 metres east of Block 150, 170 metres north of Block 103 and 250 metres above Block 152. It is hosted within a broad silica-envelope alteration zone, defined between the 230-560 levels, which is considered to have high potential for hosting further mineralization. The new zone is located near existing infrastructure in the upper levels of the mine's Western Area and was discovered as part of the ongoing 'Upper Levels' resource development drill program. The discovery is a result of drilling that was targeting mineralization outside of the current Chelopech Mineral Resource inventory. Currently drilling is in progress to test the north-easterly extension and the vertical extents of Zone 153.

As a result of close-spaced infill drilling on the upper levels of Block 19, the silica envelope that was earlier defined as a high potential area, and the Mineral Resource contours of Block 19W, were extended between 440 mRL and 370 mRL in a northwest direction. Significant intercepts from this program include drill hole EXT19W\_400\_05, which returned 22.7m at 2.76 g/t Au and 6.88% Cu.

Also part of the Block 19 program, an initial wide-spaced drilling pattern commenced in the second quarter of 2016 from location 17-395. Of significance was extensional drill hole EXT19W\_400\_14 which was oriented in a southerly direction towards Block 17 and returned 25.5 m at 2.13% Cu and 1.99g/t Au. It identified a new zone of mineralization of the style typical of ore bodies within the central area of the Chelopech deposit. It may genetically be related to the Block 17 mineralization, which is 30 metres above the intercept between 390mRL and 370mRL. Due to the initial success of the program, additional holes were subsequently drilled to explore the eastern margins of Block 17. They extended the silica envelope and delimited several small mineralized zones, which will be included in future Mineral Resource updates.

The Block 10 drilling program consisted of a total of 16 holes with a cumulative length of 4,554 metres, completed in 2016 from drill cuddy ND-730-440-VH. The objective was to further explore Block 10 and test for new mineralized zones nearby. As a result, the silica envelope and the extents of the Block 10 mineralized zone were extended down plunge. A highlight of this drill program is drill hole EXT10\_555\_02, which returned 44 metres at 7.26 g/t Au and 0.87% Cu (34.5 metres true width).

Approximately 4,230 metres of extensional drilling was accomplished for the Block 103 program from the 450 level. Drilling on the upper levels continued to test high grade zones situated close to the eastern boundary of Block 103 between 460mRL and 350mRL. The outcome of the drilling was positive, resulting in the re-definition of the silica alteration envelope and the expansion of the ore contours.

Within the Block 150 area, seven extensional drill holes were completed from the 225 level. Drill holes were designed to test for a continuation of mineralization along strike in a north-easterly direction. As a result, the silica envelope and the Mineral Resource contours of Block 150 were extended between 230 mRL and 170 mRL.

During the year, 3,180 metres of drilling was achieved in the north-west section of the deposit, in particular around the Block 149 area. Drilling from level 225 in Block 149 redefined the silica alteration envelope and the mineralized contours in the western periphery of the block. The result was the enlargement of the ore bodies in Blocks 149 and 149 South, in a westerly direction between 240 mRL and 200 mRL.

For detailed analysis of the resource development activities at the Chelopech mine, please refer to the Company's MD&A for the financial year ended December 31, 2016, which is available on the Company's website at <a href="https://www.dundeeprecious.com">www.dundeeprecious.com</a> and has been filed on the SEDAR site at <a href="https://www.sedar.com">www.sedar.com</a>.

# **Regional and Near Mine Exploration Programs**

During 2016, brownfield exploration activities at Chelopech focused on two target areas: the South East Breccia Pipe Zone ("SEBPZ"), located between and to the southeast of Blocks 10 and 103, and Sharlo Dere, located approximately 900 metres east of the Central ore bodies. Within these two target areas, a total of 2,952 metres of diamond drilling was carried out in 2016: 1,477 metres in three holes collared at surface and 1,475 metres in three holes drilled from underground positions in the mine.

The SEBPZ target area was generated from a re-logging program that started in 2014. A total of 73,500 metres of core has been re-logged, including 19,900 metres in 2016, leading to a new understanding of the ore-hosting magmatic environment at Chelopech. The new geological model, described in detail in the 2015 AIF, comprises a diatreme-maar system within a multi-phase intrusive complex. Alteration and metal zoning patterns define part of a circular-zoned high sulphidation system surrounding the interpreted core of the diatreme and indicate the system is still open and untested to the east and southeast, below the Chelopech thrust fault zone. Limited previous drilling and re-interpretation of drill logs of historical drill holes in this area were used to define the SEBPZ target area.

The original SEBPZ target area was at least 700 metres in length (NE-SW), 100 to 150 metres in width (NW-SE) and separated from the main Chelopech diatreme by a 250 to 600 metre screen of unbrecciated diorite (at the 400 metre level). Drilling in the SEBPZ target area commenced in September 2016. Two holes drilled at the northeastern end of the SEBPZ intersected phreatomagmatic breccia with extensive zones of advanced argillic alteration and weak mineralization. These holes extended the footprint of the high sulphidation system to the east and southeast by approximately 500 metres. Underground drilling in the SEBPZ target area will continue in the first quarter of 2017.

The Sharlo Dere prospect was defined by 170 state drill holes (1961-1989), however, no drill core remains from this time. The prospect is thought to be related to the Chelopech high sulphidation system but there are significant differences. In the second quarter of 2016, two diamond drill holes intersected breccias with mineralized clasts that appear to overlie the intrusive complex. One of the holes intersected a zone within the sedimentary breccia that averaged 0.31% copper and 1.23 g/t gold over 35 metres from a down hole depth of 616 metres (approximately 400 metres from surface), including 7.0 metres that averaged 0.73% copper and 2.13 g/t gold from 621 metres.

In September 2016, the Brevene exploration licence, covering an area of 36.8 km<sup>2</sup> around the Chelopech mining concession and Sveta Petka exploration licence, was granted by the Ministry of Energy. A gravity survey in the Brevene area commenced in December 2016 and is expected to be completed by the end of June 2017.

Other exploration plans at Chelopech for 2017 include the completion of the remaining 2,000 metres of underground diamond program along the SEBPZ target area. A review of the copper-gold potential of the target area and the Sharlo Dere prospect is in progress and will likely lead to a second round of drilling in 2017. In addition, planned surface exploration on the Brevene exploration licence includes mapping, soil sampling and ground magnetics to assist in identifying new drill targets.

# **Drilling**

Since DPM's acquisition of the mine, the underground resource definition drilling at Chelopech has been completed on a notional hole spacing of between  $50 \times 50$  metres and  $25 \times 25$  metres. Most surface holes are vertical or steeply inclined and average 600-700 metres in depth with some holes exceeding 1,000 metres. Underground drilling, originally horizontal, is now inclined in all orientations to achieve the best angle of intersection with most holes averaging 350-400 metres in length with some reaching lengths of 550 metres.

#### **Surface Diamond Core Drilling**

Sofia Geological Exploration began surface diamond drilling at the Chelopech copper-gold deposit in 1956. The surface holes were drilled at 76mm (approximately HQ) and core recovery was routinely measured during the drilling process. An historic recovery of 87% in the waste and 97% in the silicified material is quoted, however this cannot be verified. It is understood that the drilling was completed using the appropriate Bulgarian/Russian 'instrument'.

The Company has completed some minor surface drilling within the resource area, relating to mine works (e.g. decline and portal) however, mineralization was not targeted or encountered and therefore these holes are not material to the resource. External to the immediate resource area, the Company completed the first phase of surface drilling on a 200 x 200 metre grid in 2005/07 targeting a geophysical anomaly north of the mine, on the adjacent Smolsko exploration license that has since expired.

#### **Underground Diamond Drilling**

Chelopech Copper Processing Company ("CCPC"), Navan, Homestake and the Company have all carried out underground diamond drilling at the Chelopech deposit.

The early underground diamond drilling (BQ size), completed by CCPC, was dominantly horizontal, and designed to locate the lateral boundaries of mineralization interpreted from the surface drilling. Since Navan's involvement, modern diamond drills have been introduced with better capabilities, and drilling is now normally inclined and on section. The main objectives of underground drilling include resource evaluation drilling for multiple element analysis, geotechnical measurements and metallurgical evaluation.

Currently four drill rigs are in use; two drill rigs work resource development and two are used for grade control drilling with 45,000m achieved annually. All rigs use wire line feeders to drill BQ and NQ core.

#### **Drilling Quality**

All drill core is logged by competent geological personnel. Logging has included lithological, structural, geotechnical, and mineralogical parameters. Analytical results are also later added to the logging sheets. Although there have been a variety of geological personnel working at Chelopech, the core has been logged in a systematic and relatively uniform method. Geotechnical measurements are systematically recorded and communicated to the geotechnical department for inclusion in mine planning. All core is stored in metal boxes in a custom core storage facility at the Chelopech mine. The majority of the core drilled since 2003 has been photographed.

# **Sample Recovery**

The overall core recovery varies between 98 and 100% and averages 99.7%.

#### **Sampling and Analysis**

# Resource Development

|                              | Chelopech: Sampling and Analysis Summary                                       |  |   |   |  |  |  |  |
|------------------------------|--|--|---|---|--|--|--|--|
| Sample Type                  | Method   | Sample<br>Recovery   | Sample Interval   | Metals Assayed                                  | Lab and Assay<br>Method  |  |  |  |
| Underground<br>Face Sampling | Lower half of<br>active face<br>sampled with<br>panel chips on a<br>20 cm grid | 3-5 kilograms<br>represents 160<br>tonnes of ore                   | Faces sampled each<br>development round,<br>approximately every<br>three metres | Copper, gold,<br>silver, sulphur and<br>arsenic | SGS Chelopech Copper assayed by acid digestion with AAS finish |  |  |  |
| Diamond Core<br>Sampling     | NQ core is cut by<br>diamond saw<br>BQ core is whole<br>core sampled           | 98-100% core<br>recovery<br>Sample weight<br>between 3 and<br>7kg. | Standard sample interval of 1.5 metres, maximum 2.2 metres                      | Copper, gold,<br>silver, sulphur and<br>arsenic | Gold assayed by 25g<br>fire assay with AAS<br>finish           |  |  |  |

All samples are placed in heat resistant cotton bags with dimensions of 35 by 25 cm. Sample tickets are uniquely numbered and placed in the bags with the samples. The sample bags are arranged in order on mobile racks and dried in the oven at 110 °C for 8 to 10 hours. After drying the bags, these are loaded onto a 4x4 pick-up truck and then delivered directly to the onsite sample preparation laboratory where they are routinely assayed for Cu, Au, Ag, S and As.

Both underground face and diamond core samples are submitted for analysis, adhering to the following QAQC procedure:

- Certified Reference Materials ("CRMs"), also referred to as standards, are inserted in a ratio of 1:20;
- Blanks are inserted in a ratio of 1:50;
- Field Duplicates are inserted in a ratio of 1:20; and
- A naming convention for standards is used for QA/QC samples, so although the laboratory will know which samples are standard samples, they won't be able to identify which actual standard has been inserted.

The samples are dispatched to the Laboratory with a unique sample submission form.

#### **Brownfield Exploration**

Drill core from brownfield's exploration is logged and sampled separately and is sent to the Company's laboratory in Bor, Serbia for sample preparation and analysis. All drill core is cut lengthwise into two halves using a diamond saw; one half is sampled for assaying and the other half is retained in core trays. All drill core is sampled in intervals of up to three metres, however, the common length for sample intervals within mineralized zones is one metre. Weights of drill core samples range from three to eight kilograms, depending on the size of core, rock type, and recovery. A numbered tag is placed into each sample bag, and the samples are grouped into batches for laboratory submissions.

Quality control samples, comprising certified reference materials, blanks, and field duplicates are inserted into each batch of samples, and locations for crushed duplicates are specified. All drill core and quality control samples are tabulated on sample submission forms that specify sample preparation procedures and codes for analytical methods. For internal quality control, the laboratory includes its own quality control samples comprising certified reference materials, blanks, and pulp duplicates. Chain of custody records are maintained from sample shipment to the laboratory until analyses are completed and remaining sample materials are returned to the Company.

Drill core samples submitted to the laboratory are dried at 105°C for a minimum of 12 hours and then jaw crushed to about 80% passing 4 mm. Sample preparation duplicates are created by riffle splitting crushed samples on a 1 in 20 basis. Larger samples are riffle split prior to pulverizing, whereas, smaller samples are pulverized entirely. Pulverizing specifications are approximately 90% passing 70 microns. Gold analyses are done using a conventional 50 gram fire assay and AAS finish. Multielement analyses comprising 49 elements, including Cu, Mo, As, Bi, Pb, Sb, and Zn, are done using a four-acid digestion, and an ICP finish. Samples returning over 10,000 ppm for base metals are re-analyzed using high grade methods.

# **Bulk Density**

Bulk density measurements have been routinely completed since the start of 2003 at the (ISO9002 rated) Eurotest-Kontrol facility in Sofia using the industry standard wax coating water immersion method. The collection of bulk density data has

recently been incorporated into DPM's standard procedures which are applied to all diamond drilling, ore and development drives and stopes.

Bulk density measurements are collected as fist sized grab samples from underground, or 10 cm billets every 3 m along the length of the drill hole, including both ore and waste. These measurements have been assigned to a location or to a bulk density table in the drill hole database. In 2009, onsite density analysis was introduced and made a part of the SGS managed onsite laboratory. The determination of bulk density for rock or core samples is by paraffin wax and water immersion.

#### **Sample Preparation and Analytical**

The Chelopech laboratory operates its own sample preparation facility using standard sample preparation equipment. From late 2004, the site laboratory was upgraded and significantly re-equipped, under the supervision of SGS in order to be SGS certified. SGS manages the site laboratory as an independent sample preparation and assay facility for a monthly management fee. An SGS qualified laboratory manager is on site at all times. SGS Chelopech laboratory has been ISO 9001:2008 certificated since April, 2013.

The sample preparation procedure is as follows:

- The sample is crushed to 2mm using a jaw crusher, to a minimum 90% passing rate;
- The sample is split in a Johnson splitter, retaining 1/8 or a 600g sample for pulverising and homogenization; and
- The 600g sample is pulverized using Labtech ESSA, LM2 or, LM5 to -75 micron size. Sizing analysis is routinely undertaken as part of the assay quality assurance procedures.

Routine grade assays are undertaken by the independently SGS-managed Chelopech laboratory. Analytical procedures with respect to mine face and core samples, mill feed and mill tails are as follows:

- Copper: All samples from Chelopech have been analysed for copper by one of two methods. High grades are analysed using an iodometric method consisting of (mixed) acidic digestion followed by titration with sodium thiosulphate solution. Low-grade copper samples are analyzed by means of acid digestion followed with grade determinations by AAS;
- Gold & Silver: Gold and silver assays completed at Chelopech are determined by means of the industry standard lead fire assay method;
- Arsenic: Multi acid (HCl/HNO3) digestion with AAS Finish;
- Sulphur: Sulphur assays completed at Chelopech were determined by means of combustion in a (muffle furnace) ELTRA Analyzer LECO method; and
- The laboratory is equipped with two ICP (Inductive Coupled Plasma) instruments for multi element analysis:
  - The ICP-OES is used generally to define the concentration of various elements found in the Chelopech ore, tail
    and concentrate. The Varian ICP-735ES can perform routine analysis on more than (50)30 elements
    simultaneously. All the above digestions and solutions can be analyzed on this instrument.
  - The ICP-MS is used to analyze (more than 50 elements) for low level trace elements found in soil and stream sediment samples. It is also used to analyze for environmental water samples to sub ppb levels. This instrument is mainly used for regional exploration samples, and water samples discharged from the Chelopech mine.

Analytical procedures with respect to mill concentrate are as follows:

- Copper in ore and concentrate: Acid digestion with iodometric titration;
- Copper in tails: Two acid (H Cl/HNO3) digestion with AAS finish;
- Gold: 15g fire assay with gravimetric finish (15g is used due to high sulphur and arsenic content);
- Silver: Two acid digestion with AAS Finish;
- Arsenic: Two acid (HCI/HNO3) digestion with AAS Finish; and
- Sulphur: Combustion with Eltra instrument.

## **Quality Control Procedures**

The independent SGS-managed Chelopech laboratory quality control procedures include the following:

- Every batch of samples is recorded in a laboratory job book, and profiled using the LIMS (CCLAS) computer scheduling system;
- Two internationally accredited standards, one blank, repeats (~10%) and duplicates (~10%) of one in 20 samples are inserted randomly in every batch profiled;
- One in 20 pulverized samples is wet screened through a 75 micron sieve. 85% passing is expected. Job is repulverized if 40% of samples sieved in the batch failed (<85%);</li>
- The laboratory participates in the SGS internal round robin, where four samples every month are analyzed for various elements, and results are compared with over 140 SGS laboratories worldwide;
- The laboratory participates in the Geostats international Round Robin Survey twice a year. 40 samples are analyzed for various elements and results compared with more than 100 laboratories; and
- As part of the quality control the laboratory sends, monthly, 104 samples to an accredited international laboratory (SGS Townsville) Laboratory for QA/QC checks. Results are compiled and compared statistically, with a final report issued by SGS head office Australia.

The Chelopech geology internal quality control procedures also include the following:

- One in 20 face and drill core pulps is re-submitted as a duplicate with a different number assigned to it; and
- Review of the independent laboratory QC data on a batch by batch, guarterly and annual basis.

The Chelopech geology procedure for external (Umpire) QA/QC sample submission is as follows:

- All internal control pulp duplicates are submitted for umpire analysis;
- Every twentieth core sample pulp is submitted for umpire analysis. Approximately 5% of all face sample pulps are included;
- Samples that have discrepancies between the geological description and chemical analysis are also submitted for umpire analysis;
- An internationally accredited standard with unknown (by the laboratory) metal concentrations is inserted after every 20th sample. Geostats Australia has manufactured and certified nineteen Chelopech standards using two different types of Chelopech ores;
- One blank is inserted for every 50 samples; and
- Since 2012; on a three month basis, umpire assay analyses is performed by an internationally accredited laboratory ALS Global, Rosia Montana, Romania; ISO9001:2000 and ISO17025.

Results of the QA/QC programme for this reporting period (September 2015 to September 2016), noted issues with some of the QA/QC results which will require ongoing monitoring, but overall no fatal flaws were apparent. This indicates that the QA/QC procedures implemented at Chelopech are adequate to assess the repeatability, accuracy and precision of the assay results obtained and that the assay results should accurately reflect the grade of the samples. Results of the QA/QC review are summarized below:

#### Blank Standards

Blank standards show some minor failures for copper, but overall acceptable results.

## **Duplicates**

• Duplicates show good repeatability with no significant bias for all elements.

# CRMs (Standards)

- Gold Chelopech mine's site specific standards exhibit acceptable accuracy and precision apart from standard DPMU, which is attributed to a small sample population (less than 10);
- Copper Site specific standards mostly have acceptable accuracy except for standard DPMZ, which over reports by 8 %. This is thought to be due to the digestion and analysis methods which is different to those being used to obtain the certified value for the CRM, and at this stage is not considered material. This observation has been raised with the laboratory and ongoing vigilance is required;
- Silver Site specific standards have acceptable results except for one. Standard DPMY over reports by 19%, however the variance is exaggerated by the assay precision due to results being returned in increments of 1.5 g/t (e.g. CRM DPML has an expected value of 2.08 g/t but results are reported at 1.5 or 3.0 g/t) and the expected value being close to the detection limit. This observation has been raised with the laboratory and ongoing vigilance is required;

- Sulphur Site specific standards show acceptable accuracy; and
- Arsenic Site specific standards have acceptable accuracy except for standard DPMY, which over reports by 9%, but
  is within the 2 standard deviation threshold.

#### **Umpire Analysis**

The bias in the external check gold assay results between SGS Chelopech and ALS Rosia Montana noted in the 2015 MRE update has been investigated by submitting pulps for three-way analysis at SGS Chelopech, ALS Rosia Montana (Romania) and ALS Loughrea (Ireland). All pulp samples were analyzed by fire assay with an AAS finish. Repeatability of pair assay results was good with low calculated precision errors. Between laboratory bias for Au assays has improved since the 2015 MRE update (approximately 3% versus 6% in 2015) but is still a concern and requires ongoing monitoring.

# Krumovgrad Gold Project, Krumovgrad, Bulgaria

The technical information included in the following summary of the Krumovgrad Gold Project is derived in part and, in some cases, includes direct extracts from the Krumovgrad 2014 Technical Report, a copy of which has been filed on the SEDAR website located at www.sedar.com. See "Technical Information" for further details. Further to detailed engineering work completed since the filing of the Krumovgrad 2014 Technical Report, certain information relating to the Mining Operations, Capital and Operating Costs and Project Implementation has been updated and reviewed by Mr. Richard Gosse, Senior Vice President, Exploration of the Company, and Mr. Ross Overall, Corporate Senior Resource Geologist of the Company, who are QPs

# **Project Description, Location and Access**

The Krumovgrad Gold Project is a planned open pit gold mine located in Bulgaria which is consistent with existing permitting applications and environmental submissions and is financially viable at current gold prices.

The town of Krumovgrad is approximately 320 km southeast by paved road from the capital of Bulgaria, Sofia, which is serviced by a modern International airport. A second International Airport exists in the city of Plovdiv, located approximately 106 km northwest of Krumovgrad.

The Ada Tepe prospect is located some 3 km south of the regional centre of Krumovgrad. Access to the general area is excellent at all times of the year, by sealed roads to the regional centre of Krumovgrad. Access within the license area is good, with all-weather surface roads transecting the project area. Secondary roads are not surfaced but generally accessible with four-wheel drive vehicles year round.

Following the receipt of the construction permit in August 2016 and mobilization of the earthworks contractor, construction of the Krumovgrad Gold Project started in the fourth quarter of 2016 and remains on track for first concentrate production in the fourth quarter of 2018, at a final estimated capital cost of \$178 million, reflecting all construction, direct and indirect, costs and commissioning, including contingency (P50) of \$12.4 million, and excluding escalation, financing and sunk costs.

#### **Mineral Rights and Tenement Description**

The Ada Tepe prospect of the Khan Krum deposit is located 3 km south from the Krumovgrad town site and trends in a north south direction. The deposit area comprises of hilly topography abutting a major regional river system.

DPMKr was awarded with an Exploration Permit No1/09.05.2000 for the Krumovgrad License area covering 130 km<sup>2</sup>. Based on this permit DPMKr entered into an Agreement of Prospecting and Exploration with the MoE on June 12, 2000.

DPMKr undertook significant prospecting and exploration works, based on which it prepared an exploration report, detailing the results from the exploration resource estimation which was submitted for approval to the MoEW and the MoE. The report was reviewed by a Specialized Expert Commission at the MoEW, which approved the resource statement. Following this, on August 28, 2009, the MoEW issued a Commercial Discovery Certificate to DPMKr.

Based on the obtained Commercial Discovery Certificate, DPMKr requested issuance of a mining concession by right. The Bulgarian CoM granted a 30 year concession to DPMKr to develop the Khan Krum deposit consisting of Ada Tepe, Surnak, Sinap, Skalak, Kuklitsa and Kupel prospects in February 2011. The implementation of the mining concession is subject to having a positive EIA Resolution in full force. The CoM resolution for the mining concession was appealed by the Municipality of Krumovgrad and a group of three environmental NGO's. On October 28, 2011, the Bulgarian Supreme Administrative Court issued a ruling terminating the court proceedings on the grounds of inadmissibility of the appeals due to a lack of legal interest in the proceedings as neither party was a participant in the concession granting procedure. This ruling was appealed, and was upheld by the higher Court instance with a ruling dated January 26, 2012. This ruling was final. On April 25, 2012, DPMKr entered into a concession contract with the CoM, represented by the MoEET The concession contract confirms the rights of DPMKr to the Krumovgrad Gold Project over a 30 year period.

# **Royalties**

The Company will pay a royalty to the Bulgarian government, at a variable royalty rate applied to the gross value of the gold and silver metals contained in the ore mined. The royalty rate depends on the profitability of the operation. At a pre-tax profit to sales ratio of 10% or less, the royalty rate will be 1.44% of the value of the metals. At a pre-tax profit to sales ratio of 50% or more, the royalty rate will be 4% of the value of the metals. At intermediate levels of profitability, the royalty rate will vary on a sliding scale between 1.44% and 4% in a linear fashion. At a gold price of \$1,250/oz and a silver price of \$23/oz, the royalty rate will be in the order of 2.5% of the gross value of gold and silver metals contained in the ore produced from the mine.

#### **Permitting**

Mining and processing activities are carried out based on an LOM and APP, OCRP and ACRP where the operating activities for each specific year are described in detail. These plans require approval by the respective competent state authority which, according to the latest amendments to the Underground Resources Act, is the Ministry of Energy.

The LOM and OCRP were approved in 2013. The updated OCRP (Mine Closure Plan) was approved in October 2015. The 2017 APP and 2017 ACRP were approved in December 2016.

Following approval of the DDP in 2015, the Company submitted an application to the Executive Forestry Agency ("EFA") for final re-designation of the Krumovgrad Gold Project land from forestry land to industrial land. This final approval was received in March 2016 and the land purchase process and formal transfer of land ownership to DPM were completed in May 2016.

In June 2016, the Company submitted the construction permit application to the Krumovgrad Municipality and, following receipt of technical approvals, the final approved construction permit was received in August 2016, allowing the Company to commence construction in the fourth quarter of 2016.

The remaining construction-related approvals for the new site access road and the waste water discharge pipeline are expected in the first half of 2017, and are not pre-requisites for commencing construction at the site.

Other permitting and approvals highlights in 2016 include:

- New site access road approval was received from the EFA to re-designate some municipality owned plots of land from agricultural land to forestry land, which clears the way for the Krumovgrad Municipal Council to approve the DDP and subsequent construction permit for the new access road. Access to the site is currently by way of a temporary access road;
- Upgrading of the existing road the company executed a Project Funding Agreement with the Krumovgrad Municipality for the road upgrade to be completed by the Krumovgrad Municipality. The work was tendered and awarded in accordance with the Public Procurement Act, and the work is ongoing;
- A construction permit for the water supply pipeline was received in November 2016. The construction permit for the well superstructure was previously received in 2015; and
- A construction permit for the Central Mine Offices was received in February 2017.

Following the designation of part of the Krumovgrad Gold Project area as an Archaeological Immovable Cultural Asset ("AICA") in August 2010, DPMKr entered into a frame agreement with the National Archaeological Institute with Museum at the Bulgarian Academy of Sciences ("NAIM-BAS") to carry out archaeological work required for clearing the Krumovgrad Gold Project area. The first stage of the agreed work was completed in December 2014 and the second stage was completed in 2015. In April 2015 the Ministry of Culture issued an Order for amending the boundaries of the AICA, by virtue of which the entire area required for the investment proposal was excluded from the boundaries of AICA and effectively released for the implementation of the Krumovgrad Gold Project. Dissemination of the archaeological work results through scientific publications and development of museum exhibitions will be carried out concurrently with Krumovgrad Gold Project implementation and will have no impact on the project schedule.

The Company continues to engage in an active dialogue with the municipality, government and other stakeholders, and will do so throughout the construction phase, which includes receipt of the remaining final permanent access road and discharge pipeline approvals, and the subsequent operating approvals to support the advancement of the Krumovgrad Gold Project to operations in the fourth quarter of 2018, as planned.

### **Environmental Impact Assessment**

The Krumovgrad Gold Project underwent an EIA in 2010 and an EIA Resolution No. 18-8, 11/2011 was issued. The resolution was appealed by NGOs and, following successful litigation proceeding, entered into force in March 2013.

The purpose of the EIA procedure is to identify, describe and assess in an appropriate manner, in light of each particular case, the direct and indirect effects of a development investment proposal for execution of construction activities and technologies on: human beings; biological diversity and the elements thereof, including flora and fauna; soil, water, air, climate and the landscape; the lithosphere, physical structures and the cultural and historical heritage, as well as the interaction among these factors.

#### Closure and Rehabilitation

The integrated mine waste facility ("IMWF") has a total design footprint area of 41 ha, which is sufficient to accommodate the entire amount of mining wastes generated throughout the Ada Tepe deposit mine life. The concept of the IMWF is to place thickened tailings into cells constructed from mine rock. The mine rock provides strength required for overall stability and also internal drainage. Rehabilitation of the lower slopes of the IMWF will begin during the early stages of mine operation and the entire area of the facility of 41 ha will be fully rehabilitated at the end of the life of the mining operation. The rehabilitation will be carried out entirely with native species present in the area where the Krumovgrad Gold Project is implemented.

The IMWF will be a fully drained facility and will not contain a water pond at any time during its operation. The surface interception drain will divert the runoff from the IMWF upstream catchment and prevent it from entering into the facility. The underdrain system will collect and convey the rainfall and the excess pore water from the consolidation of the tailings. Any discharge to the river, when necessary, will be carried out only after treatment and will be downstream of the town. An interception system, comprising a grout curtain and series of water wells, will capture any seepage from the IMWF to prevent seepage reaching the river. Seepage captured by the water wells will be pumped back in to the IMWF water catchment and reticulation system, and ultimately be recycled to the plant for use as process water.

# History

- The Ada Tepe prospect had been the subject of only very brief attention in previous State funded exploration;
- GeoEngineering, Assenovgrad ("GeoEngineering") has previously explored the area covered by the Krumovgrad License using finances provided by the Bulgarian State;
- Geology and Geophysics AD, Sofia ("G&G") has also explored parts of the license area;
- GeoEngineering carried out an extensive program of geological mapping, trenching and drilling over the nearby Surnak prospect during the early-mid 1990s, together with a minor amount of trenching on the Skalak and Kuklitsa prospects;
- G&G included the entire license area in the south-east Rhodopes regional soil sampling program (average sample grid 250 metres by 50 metres) conducted during the early-mid 1990s;
- G&G also performed magnetic and induced polarization surveys across the prospect;
- The results of this work showed the presence of a gold soil geochemical anomaly of significant intensity and extent over the prospect, and a variety of geophysical anomalies;
- Navan was awarded the Krumovgrad License area on June 12, 2000 in accordance with the Agreement of Prospecting and Exploration reached with the MoEET; and
- DPMKr and the Krumovgrad Gold Project were acquired by DPM in 2003.

### **Geological Setting**

### **Regional Geology**

The Krumovgrad region is located within the Eastern Rhodopes which comprises the eastern portion of a large metamorphic complex. The massif underwent late Cretaceous to Paleogene extension leading to uplift and formation of metamorphic core complexes, including the Kessebir-Kardamos dome in the Krumovgrad area. This event was accompanied by low-angle detachment faulting, half- graben development, and the formation of sedimentary basins. The basins to the north of the Kessebir-Kardamos core complex contain Paleogene terrestrial sedimentary rocks and volcaniclastic sequences that are transitional upwards into Miocene marine sedimentary rocks.

Basement rocks in the Krumovgrad area consist of Precambrian and Paleozoic metasediments, gneisses, and amphibolites. The basement is unconformably overlain by Paleogene conglomerates, sandstones, siltstones and limestones of the Krumovgrad group that were deposited during rapid uplift of the metamorphic core complex.

Felsic to intermediate volcanism in the Eastern Rhodopes began in early Oligocene and progressed episodically until the early Miocene. Several lead-zinc (gold-silver) epithermal vein deposits are related to volcanoes formed during this period including Zvezdel and Madjarovo, which are situated 15 km west and 25 km northeast of Krumovgrad respectively. More recent Neogene-Quaternary sedimentary cover occurs throughout the region.

### **Prospect Geology**

Gold and silver mineralization in the Krumovgrad License area is predominantly hosted within the Shavar Formation proximal to the unconformable fault contact or detachment with the underlying basement rocks of the Kessebir-Kardamos core complex. Sedimentary rocks within the Shavar Formation typically form laterally discontinuous lenses ranging from chaotic breccias to conglomerate to inter-bedded pebbly sandstone, siltstone, and marl to marl-argillite. Upward variations in the stratigraphy of the Krumovgrad group reflect progression from a high-energy environment, breccia-conglomerates and coarse sandstones through to the lower energy siltstones and marls characteristic of increasing basin maturity.

The dominant structure at the Ada Tepe deposit is a 'detachment' fault that separates the metamorphic basement rocks from the overlying mineralized sedimentary rocks, and forms a 10° to 15° north dipping lower structural bounding surface to the deposit.

# **Deposit Types and Mineralization**

The Ada Tepe deposit is a low sulphidation epithermal gold-silver deposit, formed during the early Oligocene. High gold grades in association with electrum-bearing open-space fill colloform-banded and lattice-bladed silica-carbonate-adularia veins and hydrothermal breccias and the presence of sinter, suggest proximity to the paleosurface and a low sulphidation character.

Mineralization at Ada Tepe is subdivided into two types, based on the geometry and style of the mineralized zone, as follows:

- "Wall Zone" mineralization: a massive shallow dipping (15 degrees north), siliceous body forming the hanging wall
  to the detachment and defining the contact between the core complex and the overlying sedimentary rocks, and;
- "Upper Zone" mineralization: a series of predominantly east-west trending steeply dipping veins that exhibit textures indicative of forming within an epithermal environment and extend upwards into the sedimentary breccia unit above the Wall Zone.

The Wall Zone mineralization is interpreted to be associated with early silica flooding and relatively low gold grades. However those parts of the Wall Zone cut by the Upper Zone vein mineralization are typically thicker, more intensely brecciated and have higher gold grades.

#### **Mineral Reserve and Mineral Resource Estimates**

See "Summary of Mineral Reserve and Mineral Resource Estimates" for a summary of the Krumovgrad Gold Project Mineral Reserves and Mineral Resources.

Based on observations of the geology during the site visit and using all of the available geological and grade information, suitable lithology, oxidation and mineralized domain boundaries were interpreted and wireframe modeled to constrain the resource estimation for the Ada Tepe deposit.

Interpretation and digitizing of all the constraining boundaries was undertaken on north-south orientated cross sections coinciding with the drill traverses. The resultant digitized boundaries were used to construct wireframe surfaces or solids defining the 3-D geometry of each interpreted feature.

Comprehensive quality control procedures have been implemented for all data collection from 2002 onwards. A detailed statistical assessment of the sampling and analytical quality control data associated with the drilling and channel sampling was completed. The results of the assessment indicate that appropriate sampling recoveries and levels of analytical precision and accuracy have been achieved, and the exploration data are considered appropriate for use in resource estimation.

A total of 5,764 bulk density determinations were available for the purposes of resources modeling. Bulk density measurements were undertaken at the Evrotest Kontrol, in Sofia, using a water immersion method.

Mineralized domain boundaries for the purpose of constraining resource estimation were interpreted and modeled based on the geological logging, surface mapping and interpreted geological structural controls. In addition to these geological constraints, a notional 0.2g/t Au lower cutoff grade was also applied to demarcate anomalous mineralization, where appropriate.

The Mineral Resource model is based on detailed statistical and geostatistical investigations generated using 3 metre composite data subdivided by the geological interpretation. A sub-blocked block model was constructed using 12.5mE x 12.5mN x 5mRL parent cell dimensions and sub-blocking down to minimum 2.5 cubic dimensions along the modeled wireframe surfaces representing the geological interpretation and surface topography.

The principal method used to estimate resource gold grades for the "Wall Zone" was Ordinary Kriging. Multiple-Indicator Kriging was used to produce a selective mining unit resource estimate for gold in the "Upper Zone" domain. Estimation of silver grades in the resource block model has been undertaken by linear regression from the block model gold estimates. Detailed visual and statistical review of the resource was completed as part of routine validation, and the resource is considered globally robust.

The Mineral Reserves at Krumovgrad have been estimated by including a number of technical, economic and other factors. A change to any of the inputs would therefore have some effect on the overall results. Concerning mining and metallurgical factors, it is CSA's belief that sufficient work has been done by DPM to ensure that these are not likely to have any significant or material effect on Mineral Reserves.

DPMKr conducted a detailed exploration of the Ada Tepe prospect between 2000 and 2004. 52.9 km of drilling, and 18.3 km of surface trenching were completed, with more than 66,000 individual assay intervals and 5,700 bulk density determinations, which has resulted in a strong level of confidence in the data on which the resource is based. The mine plan proposed shows a high conversion of Mineral Resources to Mineral Reserves at the cut-off grades selected.

The extent of the data collected through this exploration program, and the quality control standards used provide the basis for a high level of confidence on the potential of this project.

Subject to the risk factors discussed under "Risk Factors" in this AIF and the more detailed information contained in the Krumovgrad 2014 Technical Report, DPM believes that the Mineral Reserve estimate for Krumovgrad is of low risk of being materially affected by environmental, permitting, legal, title, taxation, socio-economic, marketing, political, and other relevant issues.

#### **Mining Operations**

The Krumovgrad Gold Project is expected to produce, on average, 85,700 ounces of gold per annum, based on the Mineral Reserve. The plant is designed to treat a peak of approximately 840,000 tpa and an average of 775,000 tpa of ore over an eight year mine life, including processing stockpiled low grade ore at the end of the project. The treatment rate is consistent with existing permitting applications and environmental submissions.

All ore and waste will be mined via conventional, open pit mining methods. The operation is planned to utilize conventional mining techniques to separate ore and waste. The mining equipment considered suitable for the mining operation at the Krumovgrad Gold Project includes two 3.7 m<sup>3</sup> bucket capacity excavators, and haul trucks with a payload capacity of 40 tonnes. Provision has been made for drilling and blasting from surface.

The optimal process selected as a result of the test work program comprises a crushing and grinding of the ROM ore followed by froth flotation to produce a gold bearing concentrate.

The process plant will be located on a ridge adjacent to the IMWF and approximately 1 km south of the open pit. The grinding and flotation circuits will be enclosed in separate buildings, with the maintenance facilities for the plant, as well as small warehouse and, plant offices being incorporated in fit for purpose facilities. The mining fleet and light vehicle maintenance work will be done in a separate building about 600 metres north of the process plant.

Process plant tailings will be thickened to a high solids content (ranging between 56% Wt and 68% Wt) and disposed of in the IMWF, along with waste rock from the mine. The process plant will operate 24 hours per day, 7 days per week and is designed to process approximately 105 tph at an operating availability of 91.3%.

Metallurgical recoveries of 85% and 70% for gold and silver, respectively, were used for the feasibility assessments.

The project is expected to employ approximately 230 people on site engaged in the administration, mining, and processing operations.

DPMKr has developed a detailed list of all positions required for the project implementation and identified education and qualification requirements for each position. The information and statistical data shows that the labour market in the Krumovgrad Municipality provides opportunities for matching potential demand for DPMKr. Also, the Company initiated a process aiming to collect information on interest regarding employment for the project by local residents, as well as initial information on skills availability.

The Company will introduce training programs for the residents to help develop their skills, qualifications, knowledge and competencies. These programs will be planned, developed and arranged to meet the training needs of the Krumovgrad residents and with a focus to apply the new skills in the future. For this purpose, the Company is ready to establish a recruitment and development facility in Krumovgrad, where a team of experts and consultants will provide vocational training in selected fields.

The Krumovgrad Gold Project will be fully compliant with all European safety and environmental directives and industry Best Available Techniques requirements.

#### **Capital and Operating Costs**

During the second quarter of 2016, DPM completed a capital and operating cost update of the project. The updated initial project capital cost estimate of \$178 million reflects all construction, direct and indirect, costs and commissioning, including contingency (P50) of \$12.4 million, and excludes escalation, financing and sunk costs. Detailed engineering was completed in the second quarter of 2016 and the final equipment and material quantities were incorporated into the updated capital cost estimate.

The table below is a summary of the updated estimated capital costs required to construct and commission the project, together with the additional sustaining capital expenditures and closure costs expected to be incurred over the life of the project.

| UPDATED capital cost estimate summary <sup>(1)</sup> |       |  |  |  |
|--|-------|--|--|--|
| Item Total (\$M)                                     |       |  |  |  |
| Direct costs   | 117.1 |  |  |  |
| Indirect costs                                       | 48.7  |  |  |  |
| Contingency P50 (7.5% of direct + indirect costs)    | 12.4  |  |  |  |
| Total Initial Construction Capital                   | 178.2 |  |  |  |

| UPDATED capital cost estimate summary <sup>(1)</sup> |     |  |  |  |
|--|-----|--|--|--|
| Sustaining capital 6.2                               |     |  |  |  |
| Closure and rehabilitation costs                     | 6.0 |  |  |  |

(1) Costs expressed as Q4 2015 USD based on a USD / Euro exchange rate of 1.14.

Differences in capital cost estimate, compared with the previous estimate of \$164 million disclosed in March 2014, were due primarily to higher levels of definition resulting from the completion of detailed engineering, and detailed operation readiness planning, as noted below:

- Earthworks quantities resulting from improved scope definition following the completion of detailed engineering and higher rates;
- Operational readiness costs following more detailed scope definition and planning; and
- Increased definition of construction management costs, as a result of detailed construction execution planning.

The effect of these increases in initial capital were partially offset by the savings associated with leasing the mine fleet, which also resulted in a significant decrease in the estimated sustaining capital requirements, compared with previous estimates.

Operating costs are based on processing an average of 775,000 tonnes per year, producing an annual average of 85,700 ounces of gold and 38,700 ounces of silver for an estimated eight years.

| Summary of estimated OPERATING COSTS (1)       |       |  |  |  |
|--|-------|--|--|--|
| Item \$/t ore processe                         |       |  |  |  |
| Mining costs                                   | 15.03 |  |  |  |
| Processing costs                               | 19.39 |  |  |  |
| Tailings treatment & IMWF costs <sup>(2)</sup> | 1.88  |  |  |  |
| General & administration                       | 5.33  |  |  |  |
| Royalty  | 3.78  |  |  |  |
| Total Annual Operating Costs                   | 45.41 |  |  |  |

- (1) Expressed as Q4 2015 USD.
- (2) Integrated Mine Waste Facility.
- (3) Average cash cost over eight years.

Annual operating costs on a per tonne basis remained relatively unchanged from previous estimates, as the additional leasing costs for the mine fleet were offset by a favourable variance in the USD/Euro exchange rate, compared with previous estimates.

Based on the Mineral Reserves and Mineral Resources contained in the Krumovgrad 2014 Technical Report, as well as the updated capital and operating costs, the project economics and other key metrics are shown in the table below:

| Key Project Operating and Financial Metrics | Life of Mine Average  |  |
|---|-----------------------|--|
| Annual tonnes processed                     | 775,000 tpy           |  |
| Gold grade                                  | 4.04 g/t              |  |
| Silver grade                                | 2.22 g/t              |  |
| Strip ratio                                 | 2.6:1 waste:ore (t:t) |  |
| Gold recovery                               | 85%                   |  |
| Silver recovery                             | 70%                   |  |
| Annual gold production                      | 85,700 oz             |  |
| Annual silver production                    | 38,700 oz             |  |
| Total cash cost per oz AuEq <sup>(1)</sup>  | \$404                 |  |
| Annual EBITDA                               | \$66 million          |  |
| Total gold production                       | 685,549 oz            |  |

| Key Project Operating and Financial Metrics                 | Life of Mine Average |
|---|----------------------|
| Total silver production                                     | 309,915 oz           |
| NPV at a discount rate of 5.0%, after-tax <sup>(2)(3)</sup> | \$187.6 million      |
| Internal rate of return, after-tax <sup>(2)(3)</sup>        | 24.8%                |
| Payback period, after-tax (from start of production)        | 2.4 years            |
| Mine life   | 8 years              |

- (1) Based on long term metals prices of \$1,250/oz Au and \$15.00/oz Ag.
- (2) Based on a USD / Euro exchange rate = 1.14.
- (3) Includes an allowance for smelter terms and community investment.

## **Project Implementation**

This capital cost estimate is based on an EPCM implementation strategy. The contract for the detailed engineering of the process plant was awarded to AMEC of Perth, Australia, and the contract for the detailed engineering of the IMWF was awarded to Golder, UK. Detailed engineering was completed in the second quarter of 2016. Following receipt of the main approved construction permit in August 2016, an early works program was initiated to support earthworks, which commenced in the fourth quarter.

Main activities completed in the fourth quarter of 2016 were:

- the early works program, included the temporary site access road and tree clearing in the process plant area, to support the commencement of earthworks on the site;
- mobilization and set up of the project team at Krumovgrad;
- issuance of the purchase order for the long lead grinding mills;
- mobilization and set up of the earthworks contractor at the site;
- commencement of earthworks activities at the site; and
- completion of the first blast at the site.

At the end of February 2017, construction of the project was approximately 11% complete. Project completion remains on track for first concentrate production in late 2018, at a final estimated cost of \$178 million.

During 2016, all key milestones were achieved. The current project baseline schedule contemplates the following milestones:

| Milestone   | Actual/Expected Completion |
|---|----------------------------|
| Detailed project execution plan                             | Q1 2016 (complete)         |
| Updated capital cost estimate and baseline project schedule | Q1 2016 (complete)         |
| Land re-designation   | Q1 2016 (complete)         |
| Detailed engineering  | Q1 2016 (complete)         |
| Land purchase   | Q2 2016 (complete)         |
| Approval of technical packages                              | Q2 2016 (received)         |
| Construction permit   | Q3 2016 (received)         |
| Mobilize earthworks contractor to site                      | Q4 2016 (complete)         |
| Commence construction on site                               | Q4 2016 (commenced)        |
| Complete bulk earthworks                                    | Q4 2017                    |
| Pour first concrete on the site                             | Q2 2017                    |
| Commence main civil/mechanical/electrical construction      | Q3 2017                    |
| Start Cold Commissioning                                    | Q2 2018                    |

| Milestone   | Actual/Expected Completion |
|---|----------------------------|
| Start Hot Commissioning                                   | Q3 2018                    |
| First concentrate production and start production ramp-up | Q4 2018                    |

See "Risk Factors - Development Projects" for a discussion on the risks related to the Krumovgrad Gold Project.

## **Exploration**

During 2016, a total of 6,230 metres of diamond drilling was completed in 15 holes at four targets that were defined by gravity and interpreted structure, including the Kupel North target located 2 km east of the Ada Tepe gold deposit. Drilling at Kupel North first intersected low sulphidation epithermal mineralization with high gold grades between 280 and 325 metres from surface in hole KPDD009 in the first quarter of 2016. Mineralization with encouraging gold grades was also found in two other drill holes (KPDD011 and KPDD012) located 150 and 300 metres south of drill hole KPDD009.

A detailed study of the stratigraphic, sedimentological and geochemical variations of the sedimentary sequence hosting the mineralization and a new stratigraphic-structural model for Kupel North was completed mid-year. An eight hole drill program to test interpreted feeder structures began in October 2016 and was completed in January 2017.

The mineralization at Kupel North has mineralogical, textural and structural similarities to the upper gold-bearing zones at Ada Tepe. The gold frequently occurs as electrum in both quartz veinlets with colloform banding and disseminated in massive quartz veins that are within wider zones of quartz-chalcedony-carbonate veins and breccias. Highlights from the program are shown in the table below, while assays from the most recent three holes are pending. The Company has submitted an application for a Geological Discovery to the Ministry of Energy.

Significant intercepts from Kupel North:

| HOLE ID | EAST   | NORTH   | RL  | AZ    | DIP | FROM | то  | est. true<br>width (m) | Au<br>(g/t) | Ag (g/t) |
|---------|--------|---------|-----|-------|-----|------|-----|------------------------|-------------|----------|
| KPDD009 | 389537 | 4588439 | 258 | 140.0 | -55 | 284  | 292 | 4-6m                   | 12.81       | 4.95     |
| KPDD011 | 389412 | 4588108 | 270 | 124.0 | -60 | 307  | 308 | <1m                    | 14.79       | 2.59     |
| KPDD012 | 389461 | 4588282 | 276 | 135.5 | -60 | 370  | 375 | 2-3m                   | 17.35       | 7.06     |
| KPDD016 | 389529 | 4588266 | 269 | 180.0 | -71 | 321  | 325 | ~3m                    | 5.19        | 4.90     |

Further drilling around Kupel North and at other targets, as well as surface exploration activities, including mapping, rock chip sampling and ground magnetics, are planned for 2017.

## **Grade Control Program**

As part of the pre-production plan, an RC grade control drilling exercise will commence in the second quarter of 2017 at Ada Tepe to determine the appropriate drilling grids to be employed during production. Subsequent to this the company plans to drill-out pushback one of the Ada Tepe open pit by the first quarter of 2018.

## **Drilling**

Drilling at Ada Tepe has been undertaken using both RC and diamond drilling techniques, using a variety of independent drilling contractors. The first and second drilling programs were carried out between 2000 and 2002. Approximately 145 holes were completed as of August 2003 for the collection of 11,939 drill samples from 12,440 metres of drilling.

The third and most substantial drilling program was undertaken between September 2003 and June 2004. The program comprised 137 diamond holes (including 94 completely cored and 35 diamond tail resource holes, five 'wild cat' exploration holes and eight metallurgical holes) and 333 RC holes (including 298 complete resource holes and 35 pre-collar holes). This program resulted in a notional drilling density of 25mE by 25mN over the majority of the deposit; with most of the holes declined 60° towards the south and several scissor holes declined 60° to the north and northwest. In addition, RC infill drilling was completed to a notional 12.5m by 12.5m hole spacing in two selected areas in the south-western and central-western regions of the deposit to investigate the close spaced variability of gold and silver assay grades.

The fourth drilling program was undertaken between late October 2004 and mid November 2004. The program comprised 36 RC drill holes designed to selectively infill strongly mineralized zones within the southern third and to a lesser extent the northern flank of the deposit.

Stringent precautions were taken during both RC and diamond drilling to ensure the highest quality sample was recovered.

## **Sampling and Analysis**

| Krumovgrad: Sampling and Analysis Summary |  |   |                    |                    |  |  |
|---|--|---|--------------------|--------------------|--|--|
| Sample Type                               | Method                                       | Sample Recovery                         | Sample<br>Interval | Metals<br>Assayed  | Lab and Assay Method   |  |
| Channel<br>Sampling                       | Chiseled channel to approximate half HQ core | Approximately three kilogram per sample | One metre spacing  | Caldana            | Majority of analyses by SGS labs in<br>Romania, Australia and Bulgaria             |  |
| RC Drilling                               | RC drill cuttings riffle split per metre     | Approximately 70-<br>75% per sample     | One metre          | Gold and<br>Silver | All gold analysis by fire assay and  AAS finish  All silver analysis by aqua regia |  |
| Diamond<br>Drilling                       | NQ, HQ, & PQ core cut<br>by diamond saw      | 94% core recovery                       | One metre          |                    | digest and AAS finish  |  |

## **Channel Sampling**

Prior to March 2002, a variety of sample intervals were used in surface channel sampling, primarily controlled by changes in geology. In April 2002, RSG initiated the use of a standard RSG channel sampling method. Some 425 surface channels have been excavated at Ada Tepe from which a total of 14,770 channel samples have been collected representing a total of 18,300 metres of sampling.

# **RC Drilling**

RC samples were routinely collected at one metre intervals and the cuttings split with a Jones riffle splitter. Field duplicates were taken using the splitter every 20 samples. The bags of cuttings were routinely weighed prior to taking the sub-sample with the Jones riffle splitter.

Stringent quality control procedures have been used for all RC drilling completed at Ada Tepe to produce high quality samples. Sample weights were routinely measured on a metre by metre basis as part of the standard RC drilling procedures during the 2002 exploration program. Statistical analysis of the RC sample weights indicated an average recovery of approximately 80%, based on a theoretical sample weight of 27.4 kg.

# **Diamond Drilling**

To ensure a high sample quality stringent data collection quality control procedures have been applied. The diamond core was marked off at one metre intervals and sampled to produce half-cored (lengthways) using a diamond core saw. Crusher duplicates were produced from the same half-core following jaw crushing. Drill core recoveries were calculated by comparing the measured length of recovered core with the distance recorded on the core blocks between each drill run. Core recoveries were noted to be consistently in excess of 95%.

Until 2012, the core was routinely oriented using a 'spear' after every 3 metres or once in every two runs. Since 2012 oriented core is by Ezy Mark or Ace Tool.

### **Bulk Density**

All bulk density measurements have been completed by an ISO 9002 rated laboratory, Evrotest Kontrol, in Sofia using an ISO 9002 approved method of wax sealed water immersion bulk density measurement. Bulk density measurements have been routinely collected from core billets at approximately 3 metre downhole intervals and trench grab samples collected at 5 metre intervals. A total of 5,764 bulk density measurements are available for the Ada Tepe deposit covering all of the major rock types and variations in oxidation and weathering at locations distributed throughout the deposit. Since 2014, bulk density measurements were done by SGS Chelopech.

#### **Sample Analysis**

Sample analysis has been carried out at the following two principal, independent, internationally accredited laboratories: (1) OMAC in Ireland; and (2) SGS of Perth (Welshpool), Western Australia, Gura Rosiei (near the Rosia Montana mine site), Romania and Chelopech (part of Chelopech Mine) Bulgaria (2002-2004) and Bor, Serbia (2015 to present). For the 2002 - 2004 programs, internationally accredited external assay standards produced by Rocklabs of New Zealand were routinely inserted into the assay stream. From 2004 GEOSTATS certified reference materials were mostly used.

In addition, umpire assay analyses of approximately 5% of the routine exploration samples from the second, third and fourth exploration programs were performed by two internationally accredited laboratories: (1) Genalysis Laboratory Services, Maddington, Western Australia, Australia (2002 – 2004); ISO9002 and ISO17025; and (2) ALS Chemex, Vancouver, British Columbia, Canada (2004); ISO9001:2000 and ISO17025.

Samples from the 2000 and 2002 trench sampling and drilling were transported either to the OMAC or SGS Gura Rosiei facilities for both sample preparation and analysis. Initiation of the 2003 drilling and associated trench sampling included the establishment of an SGS sample preparation facility within a fully secured and enclosed core farm and RC sample storage facility with 24 hour security. With the exception of the first 600 samples from the 2003/04 drilling program (transported to

the SGS Gura Rosiei facility for both sample preparation and analysis), all subsequent samples from the third and fourth drilling programs underwent sample preparation at the SGS facility in Krumovgrad and subsequent transport to the SGS Gura Rosiei (Romania), SGS Welshpool (Western Australia) or SGS Chelopech (Bulgaria) or SGS Bor (Serbia) laboratories for assay analysis.

The following routine procedures have been used to prepare the trench, RC drilling and core samples for analysis:

- Dry samples at 105°C;
- Jaw crush core and trench samples to minus 2mm. A duplicate is collected every 20 samples;
- Pulverize all samples in a LM-5 crusher to 95% passing 75^micron sieve. Complete the sieve analysis on one in 20 samples;
- Clean bowl and puck of the LM-5 with compressed air after each sample and with a barren flush after every 20th sample or, as required, to remove residue build-up; and
- Complete barren flushes after DPMKr specified samples anticipated to contain high grade mineralization.

A pulp library is maintained of all samples prepared by SGS Krumovgrad which are stored in a locked room in the DPMKr core shed.

A 50 gram split was submitted for assay for gold by fire assay followed by an AAS finish and silver analyzed by multi-acid digest followed by an AAS finish. Until 2013 silver was analyzed by multi-acid digest followed by an AAS finish. Since 2014 four acid digestion followed by ICP finish analyzing 49 elements is done on all exploration samples.

The precision and accuracy of the assay data was assessed by the use of field duplicates and internationally certified laboratory standards. In addition, internationally accredited gold-silver standards were independently submitted into the assay stream by RSG at the rate of 5% of all submitted certified samples.

# **Brownfield Exploration**

Drill core from current brownfield's exploration is sent to the Company's laboratory in Bor, Serbia for sample preparation and analysis. Sampling and analytical methods are the same as those described above in the section on "Sampling and Analysis (Brownfields Exploration)" at the Chelopech Mine.

#### **Data Verification**

From June 2000 to March 2002, all exploration data collection at Ada Tepe was undertaken by DPMKr, under the upper management of Navan. From April 2002 to the present, exploration at Ada Tepe was undertaken under the management of RSG in close consultation with DPMKr field staff, Navan upper management, until September 30, 2003, and subsequently, DPM senior management.

A variety of grid systems apply over Bulgaria. The official grid system uses the Stereo 70 system. In May 2002, Australian surveying group Spectrum Surveys and Mapping Pty Ltd. ("SSM") were contracted to undertake an audit of the survey control at Ada Tepe prior to further exploration being carried out. In May 2002, Mr. Steven Glavinas, a director of SSM, carried out an audit of the existing survey control at Ada Tepe. The survey was undertaken for the following purposes:

- to investigate the grid system used (Bulgarian Government 1970 Grid) and to evaluate its suitability for the future of the mining and exploration program;
- to verify the existing government survey control;
- to audit the existing local exploration survey control and to ascertain its integrity; and
- to establish new high order survey control in future target areas.

A general sample, high order survey was undertaken to establish the accuracy of the government trigonometric survey network covering the licenses of Krumovgrad and Perunika. A more detailed sample audit survey covered the Krumovgrad target areas at Ada Tepe and Surnak. Additional, accurate survey control was established at the future exploration areas of Ada Tepe South, Kuklitsa South, Skalak and Loudetina.

### **SMELTER OPERATIONS**

# Tsumeb Smelter, Namibia

# History

- The smelter was constructed in the early 1960's and is one of few in the world equipped to treat complex concentrates as its primary feed. It is linked by rail to the Atlantic port of Walvis Bay in Namibia. The facility currently consists of one primary smelting furnace, the Ausmelt furnace;
- The smelter was part of the earlier Ongopolo mining and processing group and the Weatherly International plc. ("WTI") mining and processing business in Namibia. The transaction between the Company and WTI was structured to ensure that no environmental or regulatory liabilities that belong to any of the mining operations were attached to the smelter (except where some joint assets and liabilities existed). The smelter is also subject to an earlier agreement with the government, struck in 2000 when Tsumeb Corporation (Ongopolo's predecessor company) was in bankruptcy that limits environmental liability for events or facilities that date from a period prior to 1999; and
- On March 24, 2010, the Company completed the acquisition of DPMT from WTI through the purchase of 100% of the shares of DPMT. LDC has exclusive rights to purchase the Chelopech concentrate for toll processing through the smelter and an exclusive arrangement to further supply concentrate feed for toll processing at the smelter through to and including 2020.

### **Smelter Operations**

Complex concentrate smelted in 2016 of 200,272 tonnes was up 2% from 2015 due primarily to the installation of the new copper converters. Both blister copper (containing copper and gold) and arsenic trioxide ( $AS_2O_3$ ) until early 2017, were produced from the concentrates processed The  $AS_2O_3$  produced was sold to third party customers and used to produce materials for chemical treatments and pesticide production. In the third quarter of 2016, management made the decision to discontinue production of arsenic trioxide. Sulphuric acid production commenced in the fourth quarter of 2015 and in 2016 acid sales totaled 183,182 tonnes.

In 2016, impairment charges of \$118.7 million were recognized, of which \$107.0 million related primarily to lower forecast third party toll rates and reduced volumes related to a slower ramp-up to 370,000 tonnes per year, and \$11.2 million related to a write-down of Tsumeb's arsenic plant reflecting management's third quarter decision to discontinue production of arsenic trioxide.

# **Production History**

In 2012, DPMT was subject to a production curtailment, based on directives issued to DPMT by the Cabinet of the Republic of Namibia, relating to the operation of the smelter. The letter contained several directives emanating from the government's report on the environmental, health and safety audit, commissioned by the Minister, including: (i) that effective May 1, 2012, DPMT reduce the feed to the smelter by approximately half until the projects designed to capture fugitive emissions were completed; and (ii) DPMT advance the installation of the sulphuric acid plant from 2014 to 2013. See "Smelter Operations - Development Projects – Acid Plant" for further details on the current status of the project:

- During the second quarter of 2012, the issues related to the fugitive emissions were addressed through temporary upgrades on the fume extraction systems. These upgrades contributed to the Minister's decision to allow DPMT to increase its production to 75% of the smelter's operating capacity in July 2012;
- To reduce emissions, in 2012, the reverberatory furnace was used to treat mainly secondary materials, as well as concentrates containing lower levels of arsenic thus restricting primary smelting to the Ausmelt and limiting total throughput. In August 2013, the reverberatory furnace was permanently shut down after completing studies that confirmed significant operational cost savings per year;
- In December 2013, the Government formally authorized the smelter to return to full production, subject to certain reporting requirements;
- The smelter remains in compliance with the Cabinet mandated emissions requirements;
- In January 2014, the second oxygen plant was commissioned, allowing the smelter to achieve higher production levels;
- In the fourth guarter of 2015, the acid plant was commissioned and production of sulphuric acid commenced;
- In the first quarter of 2016, new converters were commissioned completing the \$243 million expansion project which included the new sulphuric acid plant and new converters; and
- At a Technical Committee meeting held on February 26, 2015 in Tsumeb, satisfaction was expressed at the state of progress of upgrades to the smelter and the number of measured environmental and health improvements. The mandate of the Technical Committee is expected to be completed with a close-out audit and submission of a final report to the government during 2017.

The performance of the smelter in 2016 was significantly impacted by an unplanned shutdown following a regional power outage in July that resulted in the replacement of the refractory lining of the Ausmelt furnace. This lead to a reduction in throughput of approximately 14,000 tonnes and post-commissioning issues, related to the installation of the acid plant and new copper converters, contributed to an 8,000 tonne shortfall relative to targeted performance.

#### **Development Projects**

# **Acid Plant**

As part of its long term strategy to bring the Smelter to internationally accepted environmental standards and consistent with the directives issued by the Namibian government in April 2012, DPM entered into a lump sum turn-key contract with Outotec Oyj, a process technology vendor based in Finland, for the engineering, supply, construction and commissioning of a sulphuric acid plant and replacement of two existing copper convertor units with two larger capacity converters.

Construction and commissioning of the acid plant was completed in 2015, and the plant entered into commercial production at the beginning of the fourth quarter of 2015. The two new larger copper converters, together with their associated off-gas system and tie-ins to the acid plant, were commissioned in the first quarter of 2016, as planned, and entered into commercial production during the second quarter. All off-gases that contain significant sulphur dioxide content are now being captured and routed to the acid plant, resulting in significant reductions in  $SO_2$  emissions within the smelter facilities and surrounding areas.

In conjunction with the acid plant installation, DPMT entered into a number of agreements relating to the sale, transportation and handling of the sulphuric acid produced:

- A definitive supply agreement with Rössing Uranium Limited ("Rössing") for the annual purchase of 225,000 tonnes of sulphuric acid produced by Tsumeb. Pricing on the Rössing contract is based on a market-linked pricing formula, which operates within a relatively narrow market range, providing price certainty to both parties. The supply agreement is for a term of five years and provides Rössing with an option to purchase additional tonnes, up to 85% of total production, subject to agreement on commercial terms.
- An agreement with WTI during the first quarter of 2014 for the supply of acid to WTI's Tschudi copper project. The
  agreement with Rössing and WTI enabled Tsumeb to sell all its acid envisaged to be produced during the first several
  years of acid production.
- An agreement with Protea Chemicals (Pty) Limited., a leading industrial chemicals company with significant presence in Sub-Saharan Africa, to provide acid transport logistics management as well as marketing services for the sale of any remaining acid, where required.

A contract with TransNamib, the national operator of the rail system of Namibia, for the shipment of the acid by rail directly to Rössing from Tsumeb.

The final capital cost for the construction of the acid plant and new copper converters was \$243 million, in line with the project budget.

### **Rotary Holding Furnace**

The Company continues to assess opportunities to further optimize the smelter operation, including the installation of a rotary holding furnace which is expected to provide surge capacity between the Ausmelt furnace and the converters and increase smelter recoveries. This is a potentially high return project that is expected to debottleneck and increase the throughput of complex concentrate by over 50% to up to 370,000 tonnes and, in turn, generate significant incremental margins, given the fixed cost nature of the facility.

A pre-feasibility study was completed in 2015, which evaluated a number of options to increase throughput and identified a preferred option. A subsequent feasibility study, based upon the preferred option, was completed in the fourth quarter of 2016 and confirmed the robust project economics, with an estimated implementation capital cost of approximately \$52 million. The scope of the project includes the rotary holding furnace, additional cooling and other upgrades to the Ausmelt furnace, as well as upgrades to the slag mill area.

Incremental fixed operating costs associated with the operation of the holding furnace are estimated to be approximately \$6.0 million per year, excluding the variable costs associated with the processing of any additional tonnage. Work to secure the necessary permits to support this planned increase in production are ongoing, and DPM anticipates moving forward with this project, subject to receipt of permits and adequate commercial arrangements and funding being in place.

An Environmental and Social Impact Assessment is underway for the project, and is expected to be submitted to the Namibian authorities for review and approval during 2017.

## **Environmental Management Monitoring and Reporting**

Shortly after the acquisition of the smelter, the development and roll out of an environmental management plan became a priority and was approved as part of the legislative permitting process of the Namibia Government. This plan included a number of components, including engineering upgrades, to improve emission generation and capture. For example, the fugitive dust management improvement projects, which were completed in December 2013, were aimed at improving offgas capture and workplace conditions to better comply with national standards. Key components included:

- completion of a landfill facility for the safe disposal of baghouse dust and other waste from the smelting process;
- projects to reduce dust emissions from the reverberatory and converter furnace section, which include increasing baghouse capacity, upgrading the taphole fume extraction systems, and improving ducting and fugitive fume collection;
- projects to reduce emissions from the top submerged lance (Ausmelt) smelting furnace, which include installing new baghouse dust collection equipment including dust-removal, installing new ducting and other gas handling equipment; and
- construction of a new dust transfer system, upgraded roasting and fume management facilities, enclosed storage area, bag-filling station and extraction system at the arsenic plant, all aimed at reducing the dispersal of dust.

DPMT installed state of the art environmental monitoring equipment during 2012. Four fixed and one mobile air quality monitoring stations were equipped at various locations in residential as well as the industrial areas adjacent to DPMT. These stations continuously provide sulphur dioxide as well as dust load readings in real time. Argos (previously SGS), a specialist air quality consulting company, operates the stations and provides third party independent reports on a monthly basis. Data is also available on external electronic notice boards at the smelter main entrance and the smelter's town Information Centre. Results obtained show that SO<sub>2</sub> levels occasionally exceeded South African Standards, however significant reductions in SO<sub>2</sub> levels have been observed since the commissioning and operation of the acid plant. Mean community arsenic levels in the dust are below national and international benchmarks and show a continued long-term sustainable decline. As required by our environmental management plan and in agreement with the authorities, a number of environmental performance metrics are measured and reported on a daily and monthly basis, these include: SO<sub>2</sub>, AS<sub>2</sub>O<sub>3</sub>, Dust (PM10), groundwater and meteorology. Other parameters monitored on an as needed basis include soil and surface water quality, as well as a number of critical environmental (occupational) health metrics, including urinary arsenic, personal dust (arsenic) exposure, noise, heat, and SO<sub>2</sub> exposure.

#### **Environmental Liabilities**

Environmental liabilities include the two tailings facilities (one active, one closed), a stockpile of baghouse dust (arsenic containing) which is in the process of being safely disposed, hazardous waste disposal facility, and the smelter infrastructure and auxiliary buildings. These environmental liabilities have been estimated by independent specialists based on an updated draft closure plan which is currently being reviewed by management.

The smelter also operates a slag mill which is used to reprocess the slag produced during the primary smelting process and enhances the overall metal recovery achieved in the smelter. The tailings produced are pumped to a tailings dam which dates back to the period when the Tsumeb mine and mill were still operational and is situated southwest of the smelter. During 1997 and 1998, the then owners of the TCL Mine and smelter, Gold Fields, reprocessed approximately 2 million tonnes of the tailings. This created a void in the dam which DPMT is currently filling with the slag tailings. The slag mill produced approximately 91,653, 71,302 and 180,233 tons of slag tailings during 2014, 2015 and 2016, respectively. A water management system was constructed at the TMF to ensure that all water is captured and returned to the smelter and utilized for slag milling and as cooling water.

The tailings dam was part of the property transferred to the Company when it acquired the assets from WTI in March 2010.

## **Closure and Rehabilitation**

Golder was engaged to develop a formal closure plan and costing for the hazardous waste site, various tailings and site operational facilities on DPMT premises which was completed during the fourth quarter of 2013. During 2015, the technical and financial components were reviewed and updated by Golder. Since the acquisition of the smelter in 2010, and the completion of the first closure plan, much technical work has been undertaken to provide granularity to the various items in the closure plan. This includes detailed groundwater contamination modeling, soil quality mapping and assessment, detailed reviews of the general and hazardous waste disposal facilities, including the tailings facilities, by appropriately qualified and experienced specialists. In general, there is a significantly greater degree of confidence in the detail, both technical and financial, of the closure aspects of the smelter than there was in 2010. Company personnel are working together with Golder to further optimize and improve the studies. The updated closure plan is expected to be finalized and approved by management during 2017.

### **Economic Empowerment**

Maintaining our license to operate requires alignment with the local and national objectives relevant to the areas in which DPM operates. Over the last several years, Namibia has been developing a national policy framework which aims to address the consequences from the previous discriminatory regimes. The framework was updated in late 2015 and a draft bill was circulated for comment to stakeholders during 2016. The framework is built on six pillars, including: Ownership, Management, Control and Employment Equity, Human Resources and Skills Development, Entrepreneurship Development and Marketing, Corporate Social Responsibility and Value Addition, and Technology and Innovation. Although the Namibian national policy framework and draft bill have not yet been legislated, the Company has been actively developing empowerment policies and practices that are generally consistent with the themes set out in each of the pillars contained in the framework and has been working towards structuring an ownership transaction that would provide for the sale of a 10% stake in DPMT for the benefit of disadvantaged Namibians.

### **EXPLORATION ASSETS**

#### Serbia

DPM acquired the remaining outstanding shares of Avala on April 8, 2016, increasing its ownership from 50.1% to 100% of its exploration assets in Serbia. The following is an update on the Serbian projects.

## **Timok Gold Project**

Exploration activities in Serbia during 2016 continued to focus on the evaluation of new targets close to existing resources at the Timok Gold Project. By the end of December 2016, 2,752 metres were drilled, as part of this near-resource drilling program, including one drill hole on the Coka Rakita prospect area. In addition, 52 line km of induced polarization and resistivity geophysical survey, an infill soil program (2,063 samples) and 2,453 metres of trenching were carried out in 2016. The near-resource drilling was completed by the end of January. Some assays are pending and interpretation is in progress.

The single drill hole at the Coka Rakita prospect, a gold-rich porphyry system, was drilled to test mineralization potential at depth and close to the contact of the pre-mineral, monzodioritic, intrusive pluton. The drill hole, RADD010, intersected sulphide mineralization over 15 metres with an average grade of 2.30 g/t gold from 494 metres down hole and also 23 metres with an average grade of 2.33 g/t gold from 512 metres down hole (using a 0.5g/t Au cutoff, three metre minimum length and two metre maximum internal dilution).

Near resource drilling at the Timok Gold Project identified the potential for additional mineralization approximately one km northwest of Bigar Hill and 1.5 km southwest of Korkan. Drill hole KWDD016 intersected 51 metres with an average grade of 2.00 g/t gold from 17 metres down hole (using a 0.5g/t Au cutoff, three metre minimum length and two metre maximum internal dilution). Two scissor holes drilled from a single location 60 metres to the southwest of KWDD016, at dips of -45 and -70 degrees from horizontal, have returned highlights of 35 metres with an average grade of 1.29 g/t gold from 12 metres down hole and 23 metres with an average grade of 1.29 g/t gold from 8 metres down hole, respectively (using the same cutoff parameters as KWDD016). In contrast to the mineralization at the nearby resources of Bigar Hill and Korkan, all intervals noted above are completely oxidized. The overall orientation of the mineralized zone is, however, not known and additional drilling to test the along-strike continuity is in progress.

#### **Updated Mineral Resource Estimate**

An update to the Mineral Resource estimate for the Timok Gold Project filed by Avala has been completed by CSA. See "Summary of Mineral Resource and Mineral Resource Estimates" for a summary of the Timok Mineral Resources.

As part of the MRE update, the previous Mineral Resource model, generated by the previous technical consultant in 2014, was validated and used as the basis for a pit optimization exercise. The pit optimization is based on updated (current) economic assumptions, which are used to constrain the Mineral Resource and to evaluate reasonable prospects for economic extraction. Mineral Resources have been reported for three deposits that comprise the Timok Gold Project, namely the Bigar Hill, Korkan and Kraku Pester deposits. CSA's conclusions from the study are outlined below.

CSA has reviewed procedures, visited site, viewed core, verified the locations of several drill holes, conducted spot checks between hard copy data and digital data, reviewed QA/QC results and had extensive discussions with site personnel as part of data verification work. CSA has found the site to be well run, with excellent procedures, a good understanding of the deposit geology and an emphasis on data quality that has contributed to a high degree of confidence in the data used in the MRF.

Drilling at Bigar Hill and Korkan has served to confirm the structural setting, the stratigraphy, and the geometric, spatial and lithological relationships of the gold mineralization. The controls on the mineralization at a local (sample interval) level remain less well understood, and this translates into uncertainties regarding the estimates of gold at the mining scale. This local uncertainty is unlikely to be material under an open pit mining scenario, with a relatively low level of mining selectivity. CSA advises that the level of uncertainty will increase under circumstances where cut-off grades are raised and where more selective mining regimes are applied.

CSA considers the estimation methodology (Multiple Indicator Kriging ("MIK"), with a localization post-processing step) to be suitable and provides a reliable estimation of mineable tonnes and grades. CSA has verified the estimates of the largest domains in each deposit using an alternative estimation methodology, Uniform Conditioning, which is well suited to the grade architecture seen at Timok, where grades and boundaries are gradational rather that sharply defined. Results of these comparisons have supported the grades and tonnes estimated by MIK, within an acceptable level of tolerance. Deviations in tonnes, grades and metal tend to be larger at higher cut-offs, which supports the risk outlined above that uncertainty increases as cut-off grades are raised.

Most of the resources defined at the Timok Gold Project are Indicated Mineral Resources supported by good geological knowledge, drill coverage, robust standard operating procedures and data quality, and have been classified under the guidelines of the CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council, and procedures for classifying the reported Mineral Resources were undertaken within the context of NI 43-101.

The resource model was constrained using a pit shell generated in Whittle and using current costs and other economic parameters to satisfy the criteria for a resource to have "reasonable prospects for eventual economic extraction". The parameters used in the pit optimization study are detailed below.

|            |  |                                    | Bigar<br>Hill  | Korkan                            | Kraku<br>Pester |          |
|------------|--|------------------------------------|----------------|-----------------------------------|-----------------|----------|
|            |  | Waste USD \$/t mined               |                | \$2.36                            | \$2.55          | \$2.42   |
|            |  | Ore                                | USD \$/t ore   | \$3.06                            | \$3.25          | \$3.12   |
|            | Mining Cost                                      | Rehabilitation                     | USD \$/t mined | \$0.09                            | \$0.09          | \$0.09   |
|            |  | Ore haulage from<br>Kraku Pester   | USD \$/t ore   | n/a                               | n/a             | \$3.50   |
| Costs      | Processing & Admin                               | Mill Processing<br>Costs           | USD \$/t ore   | 12.29                             | 12.29           | 12.29    |
|            | Off-Site Concentrate Transport and Smelter Costs | Total concentrate and smelter cost | \$/oz          | \$200.00                          |                 |          |
|            | Costs  | Royalty                            | %              | 5%                                |                 |          |
|            | Mining   | Mining Recovery                    | %              | 95.00%                            |                 |          |
|            | Parameters                                       | Dilution                           | %              | 0.00%                             |                 |          |
| Parameters | Processing<br>Recovery                           | Au                                 | %              | 85% 85%                           |                 | 80%      |
|            | Overall Slope                                    | Weathered Zone                     | deg.           | 45                                |                 |          |
|            | Angle  | Partially Weathered and Fresh      | deg.           | 52.5                              |                 |          |
| Revenue    |  | Price of gold                      | \$/oz          | 1,250(RF=1).Pit shell at<br>1,400 |                 | shell at |
| Analysis   |  | Discount Rate                      | %              | 7.50%                             |                 | _        |
|            |  | Grams in a Troy<br>Ounce           |                | 31.1035                           |                 |          |
|            |  | Processing Rate                    | Mtpa           | 1.68                              |                 |          |

The decrease in the Mineral Resource Estimate can be attributed to changes to input assumptions and parameters used for the constraining whittle shell, including mining costs, processing, slope and gold price (previously \$1,700/oz, now \$1,250/oz) used in the optimization analysis and reported in the constraining shell of revenue factor 1.12 (\$1,400). The decrease can also be attributed to the change in the reporting cut-off grade that has increased at Bigar Hill and Korkan from 0.3 g/t Au to 0.5 g/t Au, and at Kraku Pester from 0.3 g/t to 0.65 g/t Au. The preliminary economic assessment published by Avala in June 2014 does not reflect the updated Mineral Resource Estimates and should therefore not be relied upon.

## **Tulare Project**

The Tulare copper-gold porphyry Project (the "Tulare Project") lies within the Lece Volcanic Complex of southern Serbia and comprises several porphyry copper-gold targets including the Kiseljak and Yellow Creek deposits. A Mineral Resource estimate for Kiseljak and Yellow Creek prospects was completed. A review of the project will be conducted in 2017 with the aim to generating new targets for drilling

Resource estimation for the Kiseljak and Yellow Creek copper-gold porphyry deposits has been based on interpretations using integrated geological and grade information recorded from diamond core logging, RC logging and assay data. A suite of wireframe surfaces and solids were created representing topography, weathering (partial and complete oxidation), and geological contacts (porphyry intrusives, basement, volcanics, faults and barren dykes). Copper, gold, sulphur and bulk density values were all estimated into the model cells by ordinary kriging ("OK") with some zonal control according to the porphyry intrusive codes and oxidation zones.

All of the current Kiseljak and Yellow Creek resources was assigned to the Inferred classification, subject to qualifications based on the densities of the drill hole intersections and evidence of grade continuities. Estimated grade for both deposits extend grade-informed blocks well beyond the limits of data. Based on the potential risks associated with some of these extrapolated estimates, they are considered too high for inclusion as Inferred Resources. Consequently, a constraining solid shape has been manually constructed by contouring areas of higher drill-data density. This has the effect of limiting the estimated blocks to a margin beyond the limits of the drilling data, typically between 40m and 80m, for each of the Kiseljak and Yellow Creek deposits.

Review of the Kiseljak and Yellow Creek deposits suggests that the likely mining methods for the deposits are open-pit mining for Kiseljak, and bulk underground mining for Yellow Creek, due to the topology of the respective mineralization shells. The likelihood of the resource for the Kiseljak and Yellow Creek deposits being potentially economic was determined by generating a conceptual optimized pit shell (for Kiseljak only) using the following assumptions:

# Kiseljak Deposit

- \$1.80/tonne mining costs
- \$7.00/tonne processing and other costs
- 45 degree pit slope
- NSR Cu price of \$3.15/lb (\$3.80/lb spot price less 17% for off-site concentrate costs).
- NSR Au price of \$1,305/oz (\$1450/oz less 10% for off-site concentrate costs).
- Recovery assumptions of 75% for gold and 90% for copper Cu recovery.
- Only transitional and primary copper-gold mineralization is considered in the pit shell determination.

For Yellow Creek a pit optimization study was run as an investigation, however based on the results it was deemed that a bulk underground mining scenario was more suitable. Reported resources for the Yellow Creek deposit have been limited to within the data-density based, constraining solid.

Mineral Resources for the two deposits are based on a copper equivalent cut-off grade calculated using a \$1,300/oz gold (\$41.80/gram) price and a \$3.00/lb copper price (\$66.00/per cent). Taking into consideration currently available information, possible projected throughput rates for the Tulare Project, typical mining costs, and a range of processing costs and indicative ranges of processing recoveries, cut-off grades lie within the range of 0.15% CuEq (for an open-pit mining scenario – Kiseljak deposit) to 0.30% CuEq (for a bulk underground mining scenario – Yellow Creek deposit).

At a cut-off grade of 0.15% copper equivalent, Mineral Resources for the Kiseljak deposit are estimated at 459 Mt at 0.22% copper (2.2 billion pounds of copper) and 0.2 g/t gold (3.0 million ounces of gold) classified as Inferred category. At a cut-off grade of 0.30% copper equivalent, Mineral Resources for the Yellow Creek deposit are estimated at 88 Mt at 0.30% copper (0.6 billion pounds of copper) and 0.3 g/t gold (0.8 million ounces of gold) classified as Inferred category.

## Lenovac Project

At the Lenovac joint venture project, a ground magnetics and gravity survey was completed over the property during the second quarter of 2016 and an additional deep resistivity survey was carried out over selected areas during the period. On the basis of the results delivered from these geophysical surveys and in consultation with the joint-venture partner, Rio Tinto Mining & Exploration Limited ("Rio Tinto"), a drilling program was carried out, with total of 2,569 metres drilled by the end of December 2016, and drilling expected to continue during the first quarter of 2017. Rio Tinto has fulfilled the requirement of a minimum commitment of \$1 million by end of 2016, as required under the earn-in and joint venture agreement.

## Other

Throughout 2016, DPM also carried out early stage gold exploration on a number of 100% owned licences held by DPM subsidiaries in Bulgaria and Serbia. Grassroots exploration was also carried out in Armenia under option agreements signed with two Armenian companies in June 2015. These programs involve detailed data reviews, field traverses, systematic rockchip and channel sampling and occasionally scout drilling. In addition, DPM continues to conduct reviews of projects and prospective belts in other parts of the world.

# **INVESTMENT PORTFOLIO**

#### Sabina Gold & Silver Corp.

As at December 31, 2016, DPM held (i) 23,539,713 common shares or 10.7% of the outstanding common shares of Sabina (fair value of Cdn\$23.1 million), and (ii) 5,000,000 Series B special warrants of Sabina, which will be automatically exercised upon a positive production decision with respect to the Back River project or upon the occurrence of certain other events. Each of the Series B special warrants is exercisable into one common share of Sabina until 2044.

As at December 31, 2016, the estimated fair value of the 5,000,000 Sabina Series B special warrants was \$2.0 million (2015 - \$1.5 million).

See "Risk Factors – Value of Investment Portfolio" for further details on the risks related to the Company's investment portfolio.

# **DIVIDEND POLICY**

No dividends have been paid by the Company since 1992. The Company currently anticipates that it will retain all future earnings and other cash resources for the future operation and development of its business. Subject to the restrictions contained in any debt instruments and/or credit agreements to which the Company may be party to from time to time, payment of any future dividends will be at the discretion of the Board after taking into account many factors, including the Company's operating results, financial condition and current and anticipated cash needs. See "Description of Capital Structure – Common Shares" for further details.

### **DESCRIPTION OF CAPITAL STRUCTURE**

The authorized capital of DPM consists of an unlimited number of Common Shares and an unlimited number of Preference Shares. As of the date hereof, there were 178,440,698 Common Shares issued and outstanding, on a non-diluted basis, and no Preference Shares are issued and outstanding.

#### **Common Shares**

Holders of Common Shares are entitled to receive: (a) notice of and attend any meeting of the Common Shareholders of the Company and the right to attend such meetings, except class meetings of other classes of shares and are entitled to one vote for each share held; and (b) dividends at the discretion of the Board. Additionally, subject to the rights of holders of any shares ranking prior to the Common Shares, the holders of the Common Shares shall be entitled to receive the remaining property of the Company upon liquidation, dissolution or the winding-up of the Company.

#### **Preference Shares**

The directors of the Company may at any time and from time to time issue Preference Shares in one or more series, having such rights, restrictions, conditions and limitations attaching thereto as shall be determined by resolution of the Board and prescribed by the Articles of the Company.

In the event of any liquidation, dissolution or winding up of the Company, whether voluntary or involuntary, or other distribution of the assets of DPM among its shareholders for the purpose of winding-up its affairs, the Preference Shares of each series shall: (a) be entitled to preference over the Common Shares and over any other shares in the capital stock of the Company ranking junior to the Preference Shares with respect to the payment of dividends and the distribution of assets of the Company; and (b) rank pari passu with the Preference Shares of every other series with respect to priority in payment of dividends and in the distribution of assets.

The rights, privileges, restrictions and conditions attaching to the Preference Shares as a class may be repealed, altered, modified, amended or amplified with the approval of the holders of 66 2/3% of the votes cast at a meeting of the holders of Preference Shares.

Any consent or approval given by the holders of Preference Shares shall be deemed to have been sufficiently given if it is given in writing by the holders of all of the outstanding Preference Shares or by a resolution passed at a meeting of holders of Preference Shares called in accordance with the Articles of the Company and carried by the affirmative vote of not less than 66 2/3% of the votes cast at such meeting, in addition to any other consent or approval required by law. On every poll taken at every such meeting every holder of Preference Shares shall be entitled to one vote in respect of each Preference Share held.

The holders of Preference Shares are not entitled to vote separately as a class or series upon a proposal to: (a) increase or decrease any maximum number of authorized Preference Shares, or increase any maximum number of authorized shares or any class of shares having rights or privileges equal or superior to the Preference Shares; or (b) effect an exchange, reclassification or cancellation of all or part of the Preference Shares.

### **Share Incentive Plans**

The Company also has stock options, deferred share units, performance share units and restricted share units. See the notes to the Company's audited consolidated financial statements for the year ended December 31, 2016 for additional information regarding these securities.

### **MARKET FOR SECURITIES**

The outstanding Common Shares are listed and posted for trading on the TSX under the stock symbol "DPM".

# **Trading Price and Volume**

The monthly trading history for the year ended December 31, 2016 for the Common Shares, based on the closing price on the TSX, was as follows:

| Month 2016  | Common Shares |             |                               |  |  |  |
|-------------|---------------|-------------|-------------------------------|--|--|--|
| Wionth 2016 | High (Cdn\$)  | Low (Cdn\$) | Total Volume Traded Per Month |  |  |  |
| January     | 1.35          | 0.84        | 5,008,955                     |  |  |  |
| February    | 1.24          | 0.88        | 6,897,326                     |  |  |  |
| March       | 2.36          | 1.10        | 9,969,209                     |  |  |  |
| April       | 2.80          | 1.96        | 7,334,007                     |  |  |  |
| May         | 3.14          | 2.35        | 5,604,604                     |  |  |  |
| June        | 3.47          | 2.42        | 9,958,427                     |  |  |  |
| July        | 4.14          | 3.15        | 10,287,739                    |  |  |  |
| August      | 4.10          | 3.12        | 6,944,181                     |  |  |  |
| September   | 3.94          | 3.00        | 7,557,935                     |  |  |  |
| October     | 3.24          | 2.58        | 4,041,291                     |  |  |  |
| November    | 3.21          | 1.87        | 6,701,772                     |  |  |  |
| December    | 2.55          | 1.91        | 10,448,290                    |  |  |  |

# **DIRECTORS AND OFFICERS**

The following table sets forth the name, province/state and country of residence, position held with the Company and principal occupation of each of the directors and executive officers of DPM as of the date hereof. Directors of the Company hold office until the next annual meeting of shareholders or until their successors are elected or appointed.

| Name, Province/State and<br>Country of Residence           | Office                          | Principal Occupation                         | Became Director/Officer |
|--|---------------------------------|--|-------------------------|
| R. Peter Gillin <sup>2</sup><br>Ontario, Canada            | Lead Director                   | Corporate Director                           | 2009                    |
| Jonathan C. Goodman<br>Ontario, Canada                     | Executive Chairman and Director | President and CEO of<br>Metaform Investments | 1993                    |
| Richard Allan Howes<br>Ontario, Canada                     | Director, President and CEO     | President and CEO                            | 2010                    |
| Murray John <sup>4, 5</sup><br>Ontario, Canada             | Director                        | Corporate Director                           | 2005                    |
| Jeremy Kinsman <sup>2, 3</sup><br>British Columbia, Canada | Director                        | Corporate Director                           | 2007                    |
| Garth A.C. MacRae <sup>1, 4, 5</sup><br>Ontario, Canada    | Director                        | Corporate Director                           | 1988                    |

| Name, Province/State and<br>Country of Residence             | Office   | Principal Occupation                           | Became Director/Officer |  |
|--|--|--|-------------------------|--|
| Juanita Montalvo <sup>3, 4</sup><br>Ontario, Canada          | Director   | Managing Director, Acasta<br>Cuba Capital Inc. | 2017                    |  |
| Peter B. Nixon <sup>2, 3</sup><br>Ontario, Canada            | Director   | Corporate Director                             | 2002                    |  |
| Marie-Anne Tawil <sup>1, 3</sup><br>Québec, Canada           | Director   | Corporate Director                             | 2015                    |  |
| Anthony P. Walsh <sup>1, 2</sup><br>British Columbia, Canada | Director   | Corporate Director                             | 2012                    |  |
| Donald Young <sup>1, 4</sup> British Columbia, Canada        | Director   | Corporate Director                             | 2010                    |  |
| Executive Officers   |  |  |                         |  |
| Hume Kyle<br>Ontario, Canada                                 | Executive Vice President and CFO                                 | Officer of the Company                         | 2011                    |  |
| David Rae<br>Ontario, Canada                                 | Executive Vice President and Chief Operating Officer             | Officer of the Company                         | 2012                    |  |
| Lori Beak<br>Ontario, Canada                                 | Senior Vice President,<br>Governance, and Corporate<br>Secretary | Officer of the Company                         | 2001                    |  |
| Mark Crawley<br>British Columbia, Canada                     | Vice President, Commercial<br>Affairs                            | Officer of the Company                         | 2016                    |  |
| Michael Dorfman<br>Ontario, Canada                           | Senior Vice President,<br>Corporate Development                  | Officer of the Company                         | 2011                    |  |
| Richard Gosse<br>British Columbia, Canada                    | Senior Vice President,<br>Exploration                            | Officer of the Company                         | 2013                    |  |
| Nikolay Hristov<br>Ontario, Canada                           | Senior Vice President,<br>Sustainable Business<br>Development    | Officer of the Company                         | 2014                    |  |
| John Lindsay<br>Ontario, Canada                              | Senior Vice President,<br>Projects                               | Officer of the Company                         | 2014                    |  |
| Paul Proulx<br>Ontario, Canada                               | Senior Vice President,<br>Corporate Services                     | Officer of the Company                         | 2006                    |  |

- (1) Member of the Audit Committee;
- (2) Member of the Compensation Committee;
- (3) Member of the Corporate Governance and Nominating Committee;
- (4) Member of the Health, Safety and Environment Committee; and
- (5) Messrs. John and MacRae have expressed their intention not to stand for re-election at the next annual meeting of shareholders.

As of the date hereof, the directors and executive officers of the Company, as a group, held 772,413 Common Shares, representing less than 1% of the outstanding Common Shares.

## **Five Year Employment History**

During the last five years, all of the directors and executive officers have held their present principal occupations or other executive offices with the same company or a predecessor or affiliate thereof, except for:

Mr. Crawley who prior to November 2016, was Senior Vice President, KGHM International Limited ("KGHM"), a wholly-

- owned subsidiary of KGHM Polska Miedz SA, a Polish-based mining company; and prior to October 2013, was Director Marketing and Sales, KGHM; and, prior to April 2012 was Marketing Manager, KGHM;
- > Ms. Montalvo who, prior to January 2015, was Senior Vice President, Sherritt International Corporation, a Canadian resource company;
- Mr. Walsh who, prior to July 2012, was President and CEO of Sabina;
- Mr. Rae who, prior to November 2012, was President and CEO, Andean American Gold, a Canadian mineral exploration and development company; and, prior to July 2012, was Chairman and CEO of Sinchao Metals, a Canadian mineral exploration and development company; and, prior to 2010 was President, Andean American Gold. He was also President of Rae Mining and Metals Consulting from April 2009 to October 2012;
- Mr. Gosse who, prior to January 2013, was Vice President, Exploration, Turquoise Hill Resources, an international mineral exploration and development company; and
- Mr. Lindsay, who, prior to April 2014, was Vice President, Capital Projects Execution, Barrick Gold Corp., a mining company, and, prior to 2010, was Vice President, Operations and Technology, SNC-Lavalin, an engineering services company.

# **Cease Trade Orders, Bankruptcies, Penalties or Sanctions**

No director or executive officer of DPM or a shareholder holding a sufficient number of securities to affect materially the control of DPM:

- 1. is, or within the ten years prior to the date hereof has been, a director, chief executive officer or chief financial officer of any company (including DPM) that:
  - (a) while that person was acting in that capacity, was the subject of a cease trade or similar order or an order that denied the relevant company access to any exemption under securities legislation (collectively, an "Order"), for a period of more than 30 consecutive days; or
  - (b) was subject to an Order that was issued, after the director or executive officer ceased to be a director or executive officer, in the company being the subject of such Order, that resulted from an event that occurred while that person was acting as director, chief executive officer or chief financial officer of that company;
- 2. has, within the 10 years before the date hereof, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director, executive officer or shareholder;
- 3. is, as at the date hereof, or has been within 10 years before the date hereof, a director or executive officer of any company that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or
- 4. has been subject to:
  - (a) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or
  - (b) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable security holder making an investment decision;

#### other than:

- (i) Mr. Jonathan Goodman, Executive Chairman of the Company, who was a director of Tahera Diamond Corporation ("Tahera") from August 2003 to September 29, 2008, and Mr. Peter Gillin, Lead Director of the Company, who was also director, Chairman and CEO of Tahera, from October 2003 to December 2008, a company that filed for protection under the Companies' Creditors Arrangement Act (Canada) ("CCAA") with the Ontario Superior Court of Justice on January 16, 2008. Due to of its financial difficulties, Tahera failed to file financial statements for the year ended December 31, 2007 and subsequent financial periods. As a result, Tahera was delisted from the TSX in November 2009 and issuer cease trade orders were issued in 2010 by the securities regulatory authorities of Ontario, Québec, Alberta and British Columbia, which orders have not been revoked. Tahera subsequently sold its tax assets to Ag Growth International and certain properties, including the Jericho diamond mine, to Shear Minerals Ltd., and the monitoring process under CCAA concluded by order of the Superior Court of Justice in September, 2010; and
- (ii) Mr. Murray John, a director of the Company, is a director of African Minerals Limited ("African Minerals"), a company that was listed on the London Stock Exchange until April 7, 2015. On April 2, 2015, Deloitte LLP was

appointed as insolvency administrator for African Minerals (the "Administrator"). African Minerals continues to be managed by the Administrator.

The directors and executive officers of the Company are aware of the existence of laws governing accountability of directors and officers for corporate opportunity and requiring disclosures by directors of conflicts of interest and the Company will rely upon such laws in respect of any directors' and officers' conflicts of interest or in respect of any breaches of duty by any of its directors or officers. All such conflicts will be disclosed by such directors or officers in accordance with the CBCA and they will govern themselves in respect thereof to the best of their ability in accordance with the obligations imposed upon them by law.

#### INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Other than as described below, there have been no material transactions entered into since January 1, 2014 that have affected or are expected to materially affect the Company or any of the affiliates of the Company involving an officer or director of the Company, a holder of more than 10% of the Common Shares (a "Principal Shareholder") or any associate or affiliate of any such persons or companies.

1. On July 11, 2016, the Company completed the Offering with a syndicate of underwriters led by RBC Capital Markets, and including CIBC World Markets Inc., Dundee Securities Ltd. ("DSL"), GMP Securities L.P., Paradigm Capital Inc., Scotia Capital Inc. and BMO Nesbitt Burns Inc., raising aggregate gross proceeds of approximately Cdn\$55 million for the Company through the sale of Common Shares. The Company paid the syndicate approximately Cdn\$2,857,400 in fees and in reimbursement of certain expenses. DSL shared in the fees paid as it underwrote 10% of the Offering. DSL was, at the time of the financing, an indirect subsidiary of Dundee Corporation who owns approximately 20.4% of the Common Shares. Concurrent with the Offering, DPM also completed a non-brokered private placement of 840,000 Common Shares of the Company issued to Dundee Corporation at a price of Cdn\$3.00 per share. See "Risk Factors – Significant Shareholder" for further details.

#### LEGAL PROCEEDINGS AND REGULATORY ACTIONS

The Company was not subject to any material legal proceedings throughout the recently completed financial year and there have been no penalties or sanctions imposed against the Company by a court or regulatory body for the year ended December 31, 2016.

#### TRANSFER AGENT AND REGISTRAR

Computershare Investor Services Inc. is the transfer agent and registrar of the Common Shares at its principal offices in Toronto, Ontario.

# **MATERIAL CONTRACTS**

Other than those referred to below, there is no contract that is material to the Company that was entered into during the Company's year ended December 31, 2016, or prior thereto which is still in effect, other than a contract entered into in the ordinary course of business:

- 1. On February 15, 2013, the Company entered into an RCF with the Lenders which is comprised of two tranches of \$125 million and \$25 million are supported by guarantees from, and by pledges of the shares of, the Company's wholly-owned operating subsidiaries. Concurrent with this transaction, DPM refinanced certain DPMC loans whereby these loans were repaid with proceeds from new Term Loans between DPM and the existing Lenders. The maturity, interest rate and repayment schedule of the Term Loans are the same as the DPMC loan terms with the exception that there is no longer any cash sweep. The Term Loans are supported by pledges of the Company's shares of DPMKr, DPMC and DPMT and by guarantees from each of these Subsidiaries. See "Risk Factors Financing and Liquidity" for further details;
- 2. On June 26, 2014, to support the funding associated with its growth projects, including the Krumovgrad Gold Project, the Company increased its RCF by \$125 million to \$275 million which is supported by the existing Lenders, as well as Export Development Corporation, a new lender to the Company. Documents in relation to the above-noted loans were filed on SEDAR at www.sedar.com on March 22, 2013 and August 5, 2014, respectively;
- 3. On March 1, 2016, the Company entered into a share purchase agreement with Polymetal for the sale of its interest in DPMK through the disposition of all of its issued and outstanding shares (the "Sale Transaction"). Under the Sale Transaction, DPM, or a subsidiary thereof, received consideration consisting of (i) \$10 million in cash from the buyer, (ii) a working capital adjustment of \$5.0 million, (iii) \$15.2 million in ordinary shares of Polymetal, which were subsequently sold for net cash proceeds of \$14.8 million and (iv) a 2% net smelter royalty on future production from the Kapan property having an estimated value of \$9.5 million. The share purchase agreement included various representations, warranties, covenants and indemnities. The Company completed the sale of DPMK to Polymetal on April 26, 2016. For further information, refer to the share purchase agreement which was filed on SEDAR at www.sedar.com on March 11, 2016;

- 4. On July 11, 2016, the Company completed a bought deal financing with a syndicate of underwriters led by RBC Capital Markets, pursuant to an underwriting agreement dated June 24, 2016, as amended on July 7, 2016, entered into between the Company and the underwriters. See "General Development of the Business Recent Developments" for further details; and
- 5. On January 24, 2017, the Company completed a non-brokered private placement with the EBRD, pursuant to a subscription agreement dated December 22, 2016 entered into between the Company and EBRD, upon which the Company issued 17,843,120 Common Shares at a price of Cdn\$2.45 per share for gross proceeds of \$33.2 million (Cdn\$43.7 million). As a result of this transaction, the EBRD holds approximately 9.99% of the Company's Common Shares (on a non-diluted basis). As part of EBRD's investment, DPM has undertaken to comply with various EBRD environmental, social, economic inclusion, equal opportunity and reporting standards. DPM also covenanted to maintain its 100% ownership interest in DPMK until project completion. EBRD has been granted certain rights, including a right to maintain its *pro rata* equity interest in DPM so long as it holds a 5% equity interest in DPM.

#### NAMES AND INTERESTS OF EXPERTS

# **Names of Experts**

The following are the names of each of the QPs and other experts who are named as having prepared or certified a report, valuation, statement or opinion described, or included in a filing, or referred to in a filing, made under NI 51-102 by DPM during, or relating to, the financial year ended December 31, 2016, whose profession or business gives authority to such report, valuation, statement or opinion:

- PricewaterhouseCoopers LLP ("PwC") provided an auditor's report dated February 15, 2017 in respect of the Company's consolidated financial statements for the year ended December 31, 2016. PwC has advised that it is independent within the meaning of the Rules of Professional Conduct of the Chartered Professional Accountants of Ontario;
- Richard Gosse, MSc (Mineral Exploration), Senior Vice President, Exploration, of the Company, who is a QP and not independent of the Company, for the purposes of NI 43-101, has reviewed all technical information contained herein;
- Ross Overall, BSc (Hons), CSci, MIMMM, FGS, Corporate Senior Resource Geologist of the Company, who is a QP and not independent of the Company, for the purposes of NI 43-101, has reviewed all technical information contained herein;
- 4. Petya Kuzmanova, MIMMM, CSci, Senior Resource Geologist, DPMC Technical Services, has reviewed technical information contained herein with respect to the Chelopech mine, Bulgaria;
- Malcolm Titley, MAusIMM, MAIG, Principal Consultant of CSA, is an independent QP, for the purposes of NI 43-101, who has reviewed information contained herein with respect to the Chelopech Mineral Resource estimate;
- 6. Simon Meik, BSc (Hons), PhD, FAusIMM, a Technical Consultant, and formerly Corporate Director, Processing, of the Company, who is a QP, for the purposes of NI 43-101, and not independent of the Company, has reviewed the information contained herein with respect to the Company's Krumovgrad Gold Project, Bulgaria;
- 7. Galen White, BSc (Hons), FAusIMM, FGS, Principal Consultant of CSA, is an independent QP, for the purposes of NI 43-101, who has reviewed certain technical information contained herein with respect to the geology and Mineral Resources relating to the Company's Krumovgrad Gold Project, Bulgaria;
- 8. Julian Bennett, BSc, ARSM, FIMMM, CEng, an independent mining consultant to CSA, is an independent QP, for the purposes of NI 43-101, who has reviewed information contained herein with respect to the Krumovgrad Mineral Reserve estimates;
- Karl van Olden, BSc (Eng), GDE, MBA, FAusIMM, Mining Manager of CSA, is an independent QP, for the purposes of NI 43-101, who has reviewed technical information contained herein with respect to the Chelopech Mineral Reserve estimates; and
- 10. Peter Corrigan, BAI, CEng of Golder Associates (UK) Ltd. /Golder Associates Ireland Ltd., is an independent QP, for the purposes of NI 43-101, who has reviewed all technical information regarding the EIA, closure and rehabilitation and engineering plan contained herein with respect to the Company's Krumovgrad Gold Project, Bulgaria.

# **INTEREST OF EXPERTS**

To the best knowledge of the Company, and as of the date hereof, none of the QPs referred to above have any interest in any securities of the Company or its associates or affiliates, nor do they expect to receive or acquire any such interests other than Richard Gosse, whose interests in securities of the Company represents less than 1% of the Company's outstanding securities.

# **AUDIT COMMITTEE DISCLOSURE**

#### **Audit Committee Mandate**

The responsibilities and duties of the Audit Committee are set out in the Audit Committee's mandate, the full text of which is attached as Appendix "B" hereto.

## **Composition of the Audit Committee**

As at December 31, 2016, the Audit Committee was composed of four members, being Donald Young as Chairman, Garth A.C. MacRae, Marie-Anne Tawil and Anthony P. Walsh, all of whom are independent and financially literate for the purposes of understanding the accounting principles used by the Company in the preparation of its financial statements in accordance with National Instrument 52-110, Audit Committees.

The Audit Committee met four times during the year ended December 31, 2016.

# **Relevant Education and Experience of Audit Committee Members**

Mr. Young, FCPA, FCA has served as Chair of the Audit Committee since 2013. Mr. Young is a retired KPMG audit partner. For a number of years, he also worked as a KPMG management consulting partner focused on operational and organization reviews, governance, and control/risk management. Before joining KPMG, he worked for Placer Development Ltd. (now Barrick Gold Corporation). He currently serves on the board and chairs the audit committee of Midas Gold Corp. He has served on the boards and chaired audit committees of other publicly listed mining companies and served on the governing boards of not-for-profit organizations, including Science World British Columbia, British Columbia Safety Authority and the Canadian Institute of Chartered Accountants. Mr. Young is a Fellow and past President of the British Columbia Chartered Accountants and is a member of the Institute of Corporate Directors. During 2016, Mr. Young completed over 40 hours of qualifying professional development.

Mr. MacRae holds a Chartered Professional Accountant designation and was Vice Chairman of Dundee Corporation, formerly Dundee Bancorp Inc., an asset management company dedicated to private wealth management, real estate and resources, from 1991 to his retirement in 2004. Mr. MacRae also served as interim President and CEO of Breakwater Resources Ltd., a base metal mining company, from December 2004 to July 2005. During his 40 year career, Mr. MacRae has acted in a senior financial capacity for Hudson Bay Mining, Brinco Limited and Denison Mines Limited, all of which are metals, minerals, precious metals and/or oil and gas producers. Mr. MacRae currently serves on the board and audit committees, serving as chair on one of four other publicly-traded companies.

Ms. Tawil is a member of the Bar of the Province of Quebec and holds a Master of Business Administration from the John Molson School of Business. Ms. Tawil has over 30 years of legal experience, principally in corporate, commercial and securities law, and over 20 years of management experience. She practiced law with Stikeman Elliott LLP and McCarthy Tetrault LLP and, in 1984, joined Quebecor Inc. as Legal Counsel, and also served as Corporate Secretary from 1987 until 1990. Ms. Tawil was previously Chair of the board of Société de l'Assurance Automobile du Québec and currently serves on the board of Hydro Québec and is a member of its audit, ethics and governance and IT committee. She is also on the board of Stornoway Diamond Corporation and serves on its corporate governance and HR committee. She earned an ICD.D designation from the Institute of Corporate Directors and during 2016, participated in over 20 hours of related courses and seminars.

Mr. Walsh holds a Chartered Professional Accountant designation and was the President and CEO of Sabina from 2008 to 2011, prior to which he served as President and CEO of Miramar Mining Corporation ("Miramar") between 1999 and 2007, prior to which he served as the Vice President, Finance and chief financial officer of Miramar from 1995. Mr. Walsh has been involved in the mining business for over 25 years, and prior to joining Miramar, was the chief financial officer and Senior Vice President, Finance of International Corona Mines Ltd., a major North American gold producer, from 1989 to 1992. From 1985 to 1989, Mr. Walsh was Vice President, Finance of International Corona Mines Ltd. From 1973 to 1985, he held various positions at Deloitte, Haskins & Sells, a firm of Chartered Accountants. Mr. Walsh has been a member of the Canadian Institute of Chartered Accountants since 1976 and currently serves on the board and audit committees of three other publicly-traded exploration and development companies. During 2016, Mr. Walsh attended development presentations regarding public market, corporate governance and audit matters.

# **Policy Regarding Pre-approval of Non-Audit Services**

In accordance with its mandate, the Audit Committee has established policies and procedures for the pre-approval of allowable non-audit services provided by the Company's external auditor that safeguard the independence of the auditor. These policies and procedures provide for, among other things: all non-audit services being pre-approved by the Audit Committee or its Chair; quarterly reporting that sets out all non-audit services pre-approved and/or incurred by the auditor during the quarter; the Audit Committee's review of the independent status of the auditor in light of the services provided to the Company and its subsidiaries during the quarter; and confirmation by the auditor, at least annually, of its continued independence from the Company.

## **Audit Committee Oversight**

At no time since the commencement of the issuer's most recently completed financial year, was a recommendation of the Audit Committee to nominate or compensate an external auditor not adopted by the Board.

#### **Audit Fees**

The following table presents the fees billed to the Company from its external auditor, PwC, by category, for the years ended December 31, 2016 and December 31, 2015:

(\$ in thousands)

| Category of Fees                | December 31, 2016 | December 31, 2015 |
|---------------------------------|-------------------|-------------------|
| Audit fees <sup>1</sup>         | 504               | 630               |
| Audit-related fees <sup>2</sup> | 131               | 6                 |
| Tax fees <sup>3</sup>           | 10                | 18                |
| All other fees <sup>4</sup>     | 83                | 18                |
| Total                           | 728               | 672               |

- (1) Audit fees include the PwC audit of the year-end financial statements for consolidated DPM and certain subsidiaries and the corresponding interim reviews of these financial statements;
- (2) The audit-related fees include services performed on regulatory and transaction documents;
- (3) Tax fees include services for routine tax compliance support planning; and
- (4) All other fees include an external survey, the Canadian Public Accountability Board fee and, in 2016, also included services related to the Kapan sale.

The Company's auditor is PwC, who has audited the Company's consolidated financial statements since 2002 and expressed its opinion on the Company's consolidated financial statements. PwC has advised the Company that it is independent in accordance with the CPA Code of Professional Conduct of the Chartered Professional Accountants of Ontario.

### ADDITIONAL INFORMATION

Additional information with respect to the Company, including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities and securities authorized for issuance under equity compensation plans, as applicable, is contained in the Company's annual meeting management information circular for its most recently completed year end. Additional financial information is provided in the Company's annual audited consolidated financial statements and notes thereto and MD&A for the year ended December 31, 2016, which may be accessed via the SEDAR website located at www.sedar.com or the Company's website located at www.dundeeprecious.com.

For additional copies of this AIF, please contact: The Secretary, Dundee Precious Metals Inc., 1 Adelaide Street East, P.O. Box 195, Ste. 500, Toronto, Ontario, M5C 2V9, or by telephone at (416) 365-5191, by fax at (416) 365-9080 or email at invest@dundeeprecious.com.

# **APPENDIX "A" - GLOSSARY OF MINING TERMS**

The following is a glossary of terms that appear in this AIF:

Assay A chemical test of metallurgical samples to determine the metal content.

**Atomic Absorption** 

Spectrophotometry ("AAS")

An analytical method for determining concentrations of elements.

Ausmelt furnace The top submerged lance smelting furnace developed principally by Ausmelt and installed at

DPMT.

BQ A diamond drill core size, 36.5 mm in diameter.

Bulk Density The density of a rock sample or any material is the ratio of the mass of the rock/material to a

given volume of sample. It can be defined as the concentration of matter.

Core A cylinder of rock produced by diamond drilling.

Cut-off Grade A grade level below which the material is not ore and considered to be uneconomical to mine

and process.

Decline A passageway from surface or underground connecting one or more levels in a mine or

underground development, providing adequate traction for heavy, self-propelled equipment.

Diamond drill A type of rotary drill in which the cutting is done by abrasion rather than percussion. The

cutting bit is set with diamonds and is attached to the end of long hollow rods through which water is pumped to the cutting face. The drill cuts a core of rock which is recovered in long

cylindrical sections, an inch or more in diameter.

Dip The angle which a geological structure forms with a horizontal surface, measured

perpendicular to the strike of the structure.

Epithermal A term applied to deposits formed at shallow depths from ascending solutions of moderate

temperatures.

AuEg Gold equivalent.

Feasibility Study ("FS") A comprehensive technical and economic study of the selected development option for a

mineral project that includes appropriately detailed assessments of applicable Modifying Factors together with any other relevant operational factors and detailed financial analysis, that are necessary to demonstrate at the time of reporting that extraction is reasonably justified (economically mineable). The results of the study may reasonably serve as the basis for a final decision by a proponent or financial institution to proceed with, or finance, the development of the project. The confidence level of the study will be higher than that of a Pre-

Feasibility Study.

Fire Assay A type of analytical procedure that involves the heat of a furnace and a fluxing agent to fuse

a sample to collect any precious metals (such as gold) in the sample. The collected material is

then analyzed for gold or other precious metals by weight or spectroscopic methods.

Flotation Milling process that uses bubbles to capture valuable mineral particles that float to the

surface, thereby separating them from waste which sinks to the bottom.

Grade The amount of valuable mineral in each tonne of ore, expressed as g/t for precious metal and

as a percentage by weight for other metals such as copper and zinc.

g/t; g Au/t Grams per metric tonne; grams of gold per metric tonne.

HQ A diamond drill core size, 63.5 mm in diameter.

Holding Furnace Used to provide holding capacity between the continuous ausmelt smelting process and the

batch converting process.

Indicated Mineral Resource The part of a Mineral Resource for which quantity, grade or quality, densities, shape and

physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable

Mineral Reserve.

Inferred Mineral Resource

The part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

Measured Mineral Resource

The part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

Metallurgy

The science of extracting metals from ores by mechanical and chemical processes and preparing them for use.

Mill

A plant where ore is crushed and ground to expose metals or minerals of economic value, which then undergo physical and/or chemical treatment to extract the valuable metals or minerals.

Mineral Reserve

The economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. Mineral Reserves are sub-divided in order of increasing confidence into Probable Mineral Reserves and Proven Mineral Reserves. A Probable Mineral Reserve has a lower level of confidence than a Proven Mineral Reserve.

Mineral Resource

A concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. An Inferred Mineral Resource has a lower level of confidence than that applied to an Indicated Mineral Resource. An Indicated Mineral Resource has a higher level of confidence than an Inferred Mineral Resource but has a lower level of confidence than a Measured Mineral Resource.

Mineralization, mineralized material, mineralized deposit or deposit

A mineralized body which has been intersected by sufficient closely spaced drill holes and/or sampling to support sufficient tonnage and average grade of metal(s) to warrant further exploration-development work. A deposit does not qualify as a commercially mineable ore body until a final and comprehensive economic, technical, and FS based upon the test results is concluded and supports Proven/Probable Mineral Reserves.

Mineral Symbols

Au – gold; Ag – silver; Cu – copper; Mo – molybdenum; Pb – lead; Re – rhenium; Zn – zinc; S - sulphur; and As - arsenic.

**Modifying Factors** 

Modifying Factors are considerations used to convert Mineral Resources to Mineral Reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors.

Multiple Indicator Kriging

A grade estimation technique which uses a series of Ordinary Kriging estimates of binary transformed data.

NQ

A diamond drill core size, 47.6 mm in diameter.

**Ordinary Kriging** 

A grade estimation technique using geostatistical methods, which uses the actual analytical data

Ore

A metal or mineral or a combination of these of sufficient value as to quality and quantity to enable it to be legally mined at a profit.

Ounces/oz

Troy ounces, equivalent to 31.10348 grams.

Oz/ton Troy ounces per short ton.

PQ A diamond drill core size, 85 mm in diameter.

Preliminary Economic Assessment ("PEA")

A study, other than a pre-feasibility or feasibility study, that includes an economic analysis of the potential viability of mineral resources.

Preliminary Feasibility Study ("PFS")

A comprehensive study of a range of options for the technical and economic viability of a mineral project that has advanced to a stage where a preferred mining method, in the case of underground mining, or the pit configuration, in the case of an open pit, is established and an effective method of mineral processing is determined. It includes a financial analysis based on reasonable assumptions on the Modifying Factors and the evaluation of any other relevant factors which are sufficient for a QP, acting reasonably, to determine if all or part of the Mineral Resource may be converted to a Mineral Reserve at the time of reporting. A PFS is at a lower confidence level than a FS.

**Probable Mineral Reserve** 

The economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Mineral Reserve is lower than that applying to a Proven Mineral Reserve.

**Proven Mineral Reserve** 

The economically mineable part of a Measured Mineral Resource. A Proven Mineral Reserve implies a high degree of confidence in the Modifying Factors.

Pyrite

A mineral consisting of sulphur and iron, usually of the formula FeS<sub>2</sub>.

**Reverberatory Furnace** 

A copper concentrate and secondary's smelting furnace.

Royalty

A proportion of the cash flow which is paid to the government or other party with an interest

in a mine.

Semi-autogenous grinding

("SAG")

A process that uses the tumbling action of the material being ground, in combination with

some additional material, such as steel balls, introduced to improve the grinding.

Strike Horizontal direction or trend of a geological structure.

Tailings The material that remains after all metals or minerals of economic interest have been

removed from the ore during metallurgical treatment.

Ton Short ton (2,000 pounds).

Tonne Metric tonne (1,000 kilograms/2,204.6 pounds).

Trench sampling A sampling technique in which a shallow linear excavation is made in the ground surface which

is then methodically sampled, generally along one wall.

### APPENDIX "B" - MANDATE OF THE AUDIT COMMITTEE

Amended: July 28, 2016 Adopted: November 5, 2004

## **Purpose**

To assist the board of directors (the "Board") of Dundee Precious Metals Inc. (the "Company") in fulfilling its oversight responsibilities for:

- (a) the integrity, quality and transparency of the Company's financial statements;
- (b) the Company's internal control over financial reporting;
- (c) the Company's compliance with legal and regulatory requirements which relate to financial reporting;
- (d) the Internal Audit department;
- (e) the appointment (subject to shareholder ratification) of the Company's external auditor and approval of its compensation, as well as responsibility for its independence, qualifications and performance of all audit and audit-related work; and
- (f) such other duties as may be assigned to it from time to time by the Board.

The function of the audit committee (the "Committee") is oversight. The members of the Committee are not full-time employees of the Company. The Company's management is responsible for the preparation of the Company's financial statements in accordance with applicable accounting standards, laws and regulations. The Company's external auditor is responsible for the audit and review, as applicable, of the Company's financial statements in accordance with applicable auditing standards, laws and regulations.

In carrying out its oversight role, the Committee and the Board recognize that the Company's management is responsible for:

- (a) implementing and maintaining suitable internal controls and disclosure controls;
- (b) the preparation, presentation and integrity of the Company's financial statements; and
- (c) the appropriateness of the accounting principles and reporting policies that are used by the Company.

#### Composition

The Committee shall consist of at least three members of the Board. The Board will appoint the Committee members and the Committee Chair.

The Board will ensure that the Chair of the Committee and its members are independent and financially literate, in accordance with applicable corporate and securities laws, regulations, and stock exchange rules.

### **Procedures, Powers and Duties**

The Committee will meet at least four times a year. The Committee will invite members of management, the auditors or others to attend meetings and provide pertinent information, as necessary. All meetings shall include in camera sessions with each of the external auditor, head of Internal Audit and Chief Financial Officer. Meeting agendas will be prepared and provided in advance to members, along with appropriate briefing materials.

The Chair of the Committee has the authority to convene additional meetings, as circumstances warrant. Any member of the Committee, the Chair of the Board, Chief Executive Officer and the Chief Financial Officer shall be entitled to request that the Chair of the Committee call a meeting within 48 hours of receipt of such request.

No business shall be transacted by the Committee except at a meeting where a majority of the members are present, either in person or by telephone or video conference.

The Committee may:

- (a) engage outside legal, audit or other counsel and/or advisors at the Company's expense, without the prior approval of the Board;
- (b) set and pay the compensation of any advisors employed by the Committee;
- (c) review any corporate counsel's reports of evidence of a material violation of security laws or breaches of fiduciary duty;
- (d) seek any information it requires from employees all of whom are directed to cooperate with the Committee's request or external parties; and
- (e) meet and/or communicate directly with Company officers, external auditor or outside counsel, as necessary.

The Committee's business will be recorded in minutes of the Committee, and a report on the activities of the Committee will be made to the Board following each regularly scheduled meeting of the Committee.

## Responsibilities

The Committee will carry out the following responsibilities:

Financial Statements and Related Disclosure Documents

- Review and discuss with management and the external auditor the interim and annual consolidated financial statements
  and the related disclosures contained in Management's Discussion and Analysis and news releases and approve, or
  where required recommend to the Board for approval, in each case subject to any required change being made, prior to
  the public disclosure of this information by the Company. Such discussion shall include:
  - (a) the external auditor's judgment about the quality, not just the acceptability, of accounting principles applied by the Company;
  - (b) the reasonableness of any significant judgments made;
  - (c) the clarity and completeness of the financial statement disclosure;
  - (d) any accounting adjustments that were noted or proposed by the external auditor but were not made (as immaterial or otherwise); and
  - (e) any communication between the audit team and their national office relating to accounting or auditing issues encountered during their work.
- Review disclosures related to any insider and related party transactions.

#### **Internal Controls**

- Periodically review and assess with management, the internal auditor, and the external auditor the adequacy and
  effectiveness of the Company's systems of internal control over financial reporting and disclosure, including policies,
  procedures and systems to assess, monitor and manage the Company's assets, liabilities, revenues and expenses. In
  addition, the Committee will review and discuss the appropriateness and timeliness of the disposition of any
  recommendations for improvements in internal control over financial reporting and procedures.
- Obtain and review reports of the external auditor and reports of the internal auditor on significant findings and recommendations on the Company's internal controls, together with management's responses.
- Periodically discuss with management and the internal auditor, the Company's policies regarding financial risk
  assessment and financial risk management. While it is the responsibility of management to assess and manage the
  Company's exposure to financial risk, the Committee will discuss and review guidelines and policies that govern the
  process. The discussion may include the Company's financial risk exposures and the steps management has taken to
  monitor and control such exposures.

### **External Auditor**

- Receive reports directly from and oversee the external auditor.
- Discuss with representatives of the external auditor the plans for their quarterly reviews and annual audit, including the adequacy of staff and their proposed fees and expenses. The Committee will have separate discussions with the external auditor, without management present, on:
  - (a) the results of their annual audit and quarterly reviews;
  - (b) any difficulties encountered in the course of their work, including restrictions on the scope of activities or access to information;
  - (c) management's response to audit or quarterly review issues; and
  - (d) any disagreements with management.

Pre-approve all audit and allowable non-audit fees and services to be provided by the external auditor in accordance with securities laws and regulations and the Corporation's policies and procedures pertaining to the pre-approval and reporting of such services.

- Recommend to the Board that it recommend to the shareholders of the Company the appointment and termination of the external auditor.
- Receive reports in respect of the quarterly review and audit work of the external auditor and, where applicable, oversee
  the resolution of any disagreements between management and the external auditor.
- Ensure that at all times there are direct communication channels between the Committee and the external auditor of the Company to discuss and review specific issues, as appropriate.
- Meet separately, on a regular basis, with management and the external auditor to discuss any issues or concerns
  warranting Committee attention. As part of this process, the Committee shall provide sufficient opportunity for the
  external auditor to meet privately with the Committee.
- At least annually, obtain and review a report by the external auditor describing all relationships between the external
  auditor and the Company in order to assess external auditor independence and receive a letter each year from the
  external auditor confirming its continued independence.
- Allow the external auditor of the Company to attend and be heard at any meeting of the Committee.
- Review and approve the Company's hiring policies regarding partners, employees and former partners and employees of the present and former external auditor of the Company.
- At least annually, evaluate the external auditor's qualifications, performance and independence, including that of the external auditor's lead partner, and report the results of such review to the Board; and
- At least every five years, conduct a more comprehensive review of the external auditor's performance and report the results of such review to the Board.

#### **Internal Audit**

- Review and approve Internal Audit's charter, including its authority and organizational reporting lines on an annual basis.
- Review, discuss and, if appropriate, approve the annual audit plan for the internal audit department. Such plan will
  normally include key priorities, initiatives and planned audits; internal and external resource requirements; and the
  financial budget required to support these activities.
- Discuss Internal Audit's performance, longer term plans, and staffing requirements.

- In advance, approve the appointment, termination, bonuses and other special compensation awards as well as changes proposed by management in base compensation for the head of internal audit.
- Ensure that at all times there are direct communication channels between the Committee and the head of internal audit of the Company to discuss and review specific issues, as appropriate. Meet periodically with the head of internal audit of the Company without the presence of management and the external auditor.

## Speak Up

- Establish and review procedures established with respect to employees and third parties for:
  - (a) the receipt, retention and treatment of complaints received by the Company, confidentially and anonymously, regarding accounting, financial reporting and disclosure controls and procedures, or auditing matters; and
  - (b) dealing with the reporting, handling and taking of remedial action with respect to alleged violations of accounting, financial reporting and disclosure controls and procedures, or auditing matters, as well as certain other alleged illegal or unethical behaviour, in accordance with the Company's related policy and procedures.

## **Compliance**

- Review disclosures made by the Company's Chief Executive Officer and Chief Financial Officer regarding compliance with their certification obligations as required by the regulators.
- Review the Company's Chief Executive Officer and Chief Financial Officer's quarterly and annual assessments of the
  design and operating effectiveness of the Company's disclosure controls and procedures and internal control over
  financial reporting, respectively.
- Review the findings of any examination by regulatory agencies, and any auditor observations.
- Receive reports, if any, from management and corporate legal counsel of evidence of material violation of securities laws or breaches of fiduciary duty.

## Reporting Responsibilities

- Regularly report to the Board on Committee activities, issues and related recommendations.
- Report annually to the shareholders, describing the Committee's composition, responsibilities and how they are discharged, and any other information required by legislation.

#### **Mandate Reviews**

- The Committee shall annually review its performance relative to this mandate; and
- The Committee shall annually review the adequacy of this mandate and recommend changes to the Board.

#### Other Responsibilities

- Perform any other related activities as requested by the Board.
- Institute and oversee special investigations, as needed.