



POLYMET
MINING

POLYMET MINING CORP.

MANAGEMENT DISCUSSION AND ANALYSIS

For the three and six months ended June 30, 2019

PolyMet Mining Corp.

Management Discussion and Analysis

As at June 30, 2019 and for the three and six months ended June 30, 2019

Tabular amounts in thousands of U.S. Dollars, except for shares and per share amounts

General

The following information, prepared as at August 14, 2019, should be read in conjunction with the unaudited condensed interim consolidated financial statements of PolyMet Mining Corp. and its subsidiaries (together "PolyMet" or the "Company") as at June 30, 2019 and for the three and six months ended June 30, 2019 and related notes attached thereto, which are prepared in accordance with IAS 34, Interim Financial Reporting and in conjunction with the audited consolidated financial statements for the twelve months ended December 31, 2018 prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB"). All amounts are expressed in United States ("U.S.") dollars unless otherwise indicated.

Forward Looking Statements

This Management Discussion and Analysis ("MD&A") contains statements that constitute "forward-looking statements" within the meaning of Section 21E of the United States Securities Exchange Act of 1934, as amended (the "US Exchange Act"). These statements appear in a number of different places in this MD&A and can frequently, but not always, be identified by words such as "expects", "anticipates", "believes", "intends", "estimates", "potential", "possible", "projects", "plans" and similar expressions, or statements that events, conditions or results "will", "may", "could" or "should" occur or be achieved or their negatives or other comparable words. Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause PolyMet's actual results, performance or achievements to be materially different from any future results, performance or achievements that may be expressed or implied by such forward-looking statements. Forward-looking statements include statements regarding the outlook for the Company's future operations, plans and timing for PolyMet's exploration and development programs, statements about future market conditions, supply and demand conditions, forecasts of future costs and expenditures, the outcome of legal proceedings, and other expectations, intentions and plans that are not historical fact. The Company's actual results may differ materially from those in the forward-looking statements due to risks facing PolyMet or due to actual facts differing from the assumptions underlying the Company's predictions.

The forward-looking statements contained in this MD&A are based on assumptions, which include, but are not limited to:

- Obtaining and maintaining permits;
- Raising the funds necessary to develop the NorthMet Project and continue operations;
- Execution of prospective business plans; and
- Complying with applicable government regulations and standards.

Such forward-looking statements are subject to risks, uncertainties and other factors, including those listed or incorporated by reference under "Risk Factors" in the Annual Information Form. These risks, uncertainties and other factors include, but are not limited to:

- Changes in general economic and business conditions, including changes in interest rates and exchange rates;
- Changes in the resource market including prices of natural resources, costs associated with mineral exploration and development, and other economic conditions;
- Natural phenomena;
- Actions by governments and authorities including changes in government regulation;
- Uncertainties associated with legal proceedings; and
- Other factors, many of which are beyond the Company's control.

All forward-looking statements included in this MD&A are based on information available to the Company on the date of this MD&A. The Company expressly disclaims any obligation to update publicly, or otherwise, these statements, whether as a result of new information, future events or otherwise except to the extent required by law, rule or regulation. Readers should not place undue reliance on forward-looking statements. Readers should carefully review the cautionary statements and risk factors contained in this and all other documents that the Company files from time to time with regulatory authorities.

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Cautionary note to U.S. investors: The terms “measured and indicated mineral resource”, “mineral resource”, and “inferred mineral resource” used in this MD&A are Canadian geological and mining terms as defined in accordance with National Instrument 43-101, Standards of Disclosure for Mineral Projects (“NI 43-101”) under the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum (the “CIM”) Standards on Mineral Resources and Mineral Reserves. U.S. investors are advised that while such terms are recognized and required under Canadian regulations, the SEC does not recognize these terms. Mineral Resources do not have demonstrated economic viability. It cannot be assumed that all or any part of a Mineral Resource will be upgraded to Mineral Reserves. Under Canadian rules, estimates of inferred mineral resources may not form the basis of or be included in feasibility or other studies. U.S. investors are cautioned not to assume that any part of an inferred mineral resource exists or is economically or legally mineable.

Summary of Business

PolyMet is a TSX and NYSE American listed Issuer engaged in the exploration and development of natural resource properties. The Company’s primary mineral property and principal focus is the commercial development of its NorthMet Project (“NorthMet” or “Project”), a polymetallic project in northeastern Minnesota, United States of America, which hosts copper, nickel, cobalt, gold, silver and platinum group metal mineralization.

The NorthMet ore body is at the western end of a series of known copper-nickel-precious metals deposits in the Duluth Complex. An updated technical report and feasibility study published in March 2018 confirmed the technical and economic viability, positioning NorthMet as the most advanced of the four main deposits in the Duluth Complex: namely, from west to east, NorthMet, Mesaba, Serpentine and Maturi.

The Erie Plant is located about six miles west of the NorthMet ore body and comprises a 100,000 ton-per-day crushing and milling facility, a railroad and railroad access rights connecting the Erie Plant to the NorthMet ore body, tailings storage facilities, 120 railcars, locomotive fueling and maintenance facilities, water rights and pipelines, administrative offices and lands to the east and west of the existing tailings storage facilities.

PolyMet completed a land exchange with the U.S. Forest Service (“USFS”) on June 28, 2018 and now controls surface rights to approximately 19,050 acres or 30 square miles of contiguous surface rights stretching from west of the Erie Plant to east of the proposed East Pit at NorthMet.

PolyMet received its Permit to Mine from the State of Minnesota on November 1, 2018, a crucial permit for construction and operation of the NorthMet Project. The Minnesota Department of Natural Resources (“MDNR”) also issued all other permits for which the Company had applied including dam safety, water appropriations, takings, and public waters work permits, along with Wetlands Conservation Act approval. In addition, PolyMet received air and water permits from the Minnesota Pollution Control Agency (“MPCA”) on December 18, 2018. Further, PolyMet received the federal Record of Decision and Section 404 wetlands permit from the U.S. Army Corps of Engineers (“USACE”) on March 21, 2019, which was the last key permit or approval needed to construct and operate the NorthMet Project.

See additional discussion below.

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Summary of Recent Events and Outlook

Highlights and recent events

PolyMet made significant progress during 2018 and 2019 to date. Notably the Company received key permits and approvals required to construct and operate NorthMet and secured title to the surface rights over and around the NorthMet mineral rights. PolyMet also released an updated technical report which included an assessment of higher potential production scenarios, and secured additional financing to complete permitting, including required wetland credits and financial assurance, advanced final engineering and other activities to facilitate the transition to construction.

More specifically:

- In June 2019, the Company completed a \$265 million rights offering, fully backstopped by Glencore, AG (“Glencore”) with the proceeds used to fully repay outstanding debt and strengthen the Company’s financial position. As a result of the rights offering, Glencore’s ownership of the Company’s issued shares increased to 71.6%;
- In preparation for construction, the Company in the first two quarters completed geotechnical investigations, installed monitoring wells, advanced project execution planning and implemented its environmental management system;
- In March 2019, the Company received the federal Record of Decision and wetlands permit from the USACE, which was the last key permit or approval needed to construct and operate the NorthMet Project;
- In December 2018, the Company received all MPCA permits for NorthMet for which the Company had applied, including air and water permits;
- In November 2018, the Company received all MDNR permits for NorthMet for which the Company had applied, including the Permit to Mine, dam safety and water appropriations permits; and
- In June 2018, the Company and USFS completed the federal land exchange giving PolyMet title and control over both surface and mineral rights in and around the NorthMet ore body.

Net cash used in operating and investing activities during the six months ended June 30, 2019 was \$10.466 million. Primary activities during the period were related to permitting the NorthMet Project and monitoring and compliance. Other spending related to engineering and studies, early works to prepare the site for construction, maintaining existing infrastructure, financing and general corporate purposes.

Goals and Objectives for the Next Twelve Months

PolyMet’s objectives include:

- Maintain political, social and regulatory support for the Project;
- Finalize Project optimization plan;
- Finalize Project implementation plan; and
- Execution of construction finance, subject to typical conditions precedent.

The Company is in discussions with commercial banks and other sources of debt and equity finance sufficient to fund construction of the Project. Construction and ramp-up to commercial production is anticipated to take approximately thirty months from receipt of construction funding.

See additional discussion in the “Liquidity and Capital Resources” section below.

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Detailed Description of Business

Asset Acquisitions

In November 2005, the Company acquired the Erie Plant, which is located approximately six miles west of the NorthMet deposit and includes crushing and milling equipment, comprehensive spare parts, plant site buildings, real estate, tailings storage facilities and mine workshops, as well as access to extensive mining infrastructure including roads, rail, water and power. The plant was managed by Cliffs Erie LLC, a subsidiary of Cleveland-Cliffs Inc. (together "Cliffs") for many years and was acquired by Cliffs from LTV Steel Mining Company ("LTV") after LTV's bankruptcy, at which time the plant was shut down with a view to a potential restart.

Plans are to refurbish, reactivate and, as appropriate, update the crushing, concentrating and tailings storage facilities at the Erie Plant to produce concentrates containing copper, nickel, cobalt and precious metals – platinum, palladium, gold and silver. Once commercial operations are established, the Company may install an autoclave to upgrade nickel concentrates to produce a nickel-cobalt hydroxide and a precious metals precipitate.

In December 2006, the Company acquired from Cliffs additional property and associated rights sufficient to provide a railroad connection linking the NorthMet deposit and the Erie Plant. The transaction also included 120 railcars, locomotive fueling and maintenance facilities, water rights and pipelines, administrative offices and land to the east and west of the existing tailings storage facilities.

PolyMet indemnified Cliffs for reclamation and remediation associated with the property under both transactions. In April 2010, Cliffs entered into a consent decree with the MPCA regarding short-term and long-term environmental mitigation. Field studies were completed in 2010 and 2011 and short-term mitigations approved by the MPCA were initiated in 2011. In April 2012, long-term mitigation plans were submitted to the MPCA and in October 2012, the MPCA approved plans for pilot tests of various treatment options to determine the best course of action. Although there is substantial uncertainty related to applicable water quality standards and engineering scope, the October 2012 response from the MPCA, subsequent communications amongst the MPCA, Cliffs and the Company, and closure plans reflected in the Permit to Mine support the long-term mitigation plans included in the Company's environmental rehabilitation provision.

In June 2018, the Company acquired surface rights over the NorthMet deposit through a land exchange with the USFS using land the Company previously owned. With the exchange, PolyMet has total surface rights, including ownership and other use and occupancy rights, to approximately 19,050 contiguous acres or 30 square miles of land including the land at the mine and processing sites, the transportation corridor connecting those sites, and buffer lands.

Mineral rights in and around the NorthMet ore body are held through two mineral leases with RGGGS Land & Minerals Ltd., L.P. ("RGGGS") and LMC Minerals ("LMC"). The RGGGS lease covers 5,123 acres. Provided the Company continues to make annual lease payments, the lease period continues until June 12, 2048 with an option to extend the lease for up to five additional ten-year periods on the same terms and further extend as long as there are commercial mining operations. The LMC lease covers 120 acres that are encircled by the RGGGS property. Provided the Company continues to make annual lease payments, the lease period continues until December 1, 2028 with an option to extend the lease for up to four additional five-year periods on the same terms. Lease payments to both lessors are considered advance royalty payments and will be deducted from future production royalties payable to the lessor, which range from 3% to 5% based on the net smelter return per ton received by the Company.

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Feasibility Study, Mineral Resources and Mineral Reserves

PolyMet published an updated Technical Report under NI 43-101 dated March 26, 2018 incorporating process improvements, Project improvements and environmental controls described in the Final EIS and draft permits. The update also includes detailed capital costs, operating costs and economic valuations for the mine plan being permitted. Preliminary economic assessments for higher production scenarios were also presented. Proven and probable mineral reserves are estimated to be 254.7 million short tons grading 0.294% copper, 0.084% nickel, 80 ppb platinum, 268 ppb palladium, 39 ppb gold, 74.42 ppm cobalt, and 1.06 ppm silver. These mineral reserves lie within measured and indicated mineral resources of an estimated 649.3 million short tons grading 0.245% copper, 0.074% nickel, 65 ppb platinum, 221 ppb palladium, 33 ppb gold, 71 ppm cobalt, and 0.91 ppm silver. The mineral reserve estimates are based on metal prices of \$2.93 per pound copper, \$6.50 per pound nickel, \$13.28 per pound cobalt, \$734 per ounce palladium, \$1,286 per ounce platinum, \$1,263 per ounce gold and \$19.06 per ounce silver. The mineral resource estimates are based on metal prices of \$3.30 per pound copper, \$8.50 per pound nickel, \$13.28 per pound cobalt, \$734 per ounce palladium, \$1,286 per ounce platinum, \$1,263 per ounce gold and \$19.06 per ounce silver. Metal recovery factors are applied to each metal based on recovery curves developed. The net smelter return cutoff was set at \$7.98 per ton for mineral reserves and \$7.35 per ton for mineral resources and include processing, general and administrative, and water treatment costs. See additional details in the Company's most recent Annual Information Form or the Company's NorthMet Project Form NI 43-101F1 Technical Report dated March 26, 2018, both filed on SEDAR and EDGAR.

Environmental Review and Permitting

In November 2015, the MDNR, USACE, and USFS published the Final EIS and in March 2016, the MDNR issued its decision that the Final EIS met the requirements under the Minnesota Environmental Policy Act.

In November 2018, the Company received all final MDNR permits for which the Company had applied, including the Permit to Mine, dam safety, water appropriations, endangered and threatened species takings, and public waters work permits, along with Wetland Conservation Act approval.

In December 2018, the Company received all final MPCA permits for which the Company had applied, including the water quality permit, air emission quality permit, and Section 401 Certification.

Legal challenges were filed in the Minnesota Court of Appeals contesting various aspects of the MDNR and MPCA decisions. PolyMet is a co-respondent in all suits. In June 2019, the Court of Appeals transferred the challenge to the water quality permit to the Ramsey County District Court for the limited purpose of an evidentiary hearing.

In March 2019, the Company received the federal Record of Decision and wetlands permit from the USACE, which was the last key permit or approval needed to construct and operate the NorthMet Project.

USFS Land Exchange

In January 2017, the USFS issued its Final ROD authorizing the land exchange which stated the land exchange eliminates a fundamental conflict between the rights that PolyMet has as a result of control of the mineral rights and the USFS position on those rights which otherwise could result in litigation that has no certain outcome and could set a judicial precedent regarding other lands acquired in the same deed under the Weeks Act.

Four legal challenges were filed during 2017 contesting various aspects of the land exchange Final ROD. PolyMet is a co-defendant with the USFS in this proceeding. Motions were filed by PolyMet to dismiss each of these suits for lack of standing. In August 2017, the U.S. District Court for the District of

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Minnesota denied WaterLegacy's motion for a preliminary injunction to stop the land exchange from proceeding while the WaterLegacy suit was pending.

In June 2018, the Company and USFS exchanged titles to federal and private lands, completing the land exchange giving the Company control over both surface and mineral rights in and around the NorthMet ore body and consolidating the Superior National Forest's land holdings in northeast Minnesota.

Financing Activities

Glencore Financing

Since October 2008, the Company and Glencore have entered into a series of financing agreements comprising:

- Equity – five separate agreements comprising \$25.0 million placement of PolyMet common shares in calendar 2009 in two tranches; a \$30.0 million placement of PolyMet common shares in calendar 2010 in three tranches; a \$20.0 million placement of PolyMet common shares in calendar 2011 in one tranche; a \$20.960 million purchase of PolyMet common shares in the 2013 Rights Offering; a \$10.583 million purchase of PolyMet common shares in the 2016 Private Placement; and a \$243.435 million purchase of PolyMet common shares in the 2019 Rights Offering;
- Convertible debt (“Glencore Convertible Debt”) – agreement comprising \$25.0 million initial principal secured convertible debentures drawn in four tranches. The convertible debt balance was fully repaid with proceeds from the Rights Offering; and
- Non-convertible debt (“Glencore Non-Convertible Debt”) – five separate agreements comprising \$30.0 million initial principal secured debentures in calendar 2015 drawn in four tranches; an \$11.0 million initial principal secured debenture in calendar 2016 drawn in one tranche; \$14.0 million initial principal secured debentures in calendar 2016 drawn in four tranches; \$20.0 million initial principal secured debentures in calendar 2017 drawn two tranches; and \$80.0 million initial principal secured debenture in calendar 2018 drawn in four tranches with the fifth tranche in the amount of \$15.0 million cancelled. The non-convertible balance was fully repaid with proceeds from the Rights Offering.

As a result of these financing transactions and the purchase by Glencore of PolyMet common shares previously owned by Cliffs, Glencore's ownership and ownership rights of PolyMet as at June 30, 2019 comprises:

- 720,084,055 shares representing 71.6% of PolyMet's issued shares (December 31, 2018 - 92,836,072 shares);
- Warrants to purchase 7,453,068 common shares at \$0.6384 per share at any time until March 31, 2024, subject to mandatory exercise if the 20-day volume weighted average price (“VWAP”) of PolyMet common shares is equal to or greater than 150% of the exercise price and PolyMet has received permits and construction finance is available (“Exercise Triggering Event”), and where the exercise price and the number of warrants are subject to conventional anti-dilution provisions triggered upon closing of the Rights Offering on June 28, 2019;
- Warrants to purchase 8,142,776 common shares at \$0.8665 per share at any time until October 28, 2021, subject to acceleration at the Company's option provided all permits necessary to construct NorthMet have been received (“Acceleration Triggering Event”), and where the exercise price and the number of warrants are subject to conventional anti-dilution provisions triggered upon closing of the Rights Offering on June 28, 2019; and

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- Warrants to purchase 721,302 common shares at \$0.6756 per share at any time until October 28, 2021, and where the exercise price and the number of warrants are subject to conventional anti-dilution provisions triggered upon closing of the Rights Offering on June 28, 2019.

If Glencore were to exercise all of its rights and obligations under these agreements, it would own 736,401,201 common shares of PolyMet, representing 72.1% on a partially diluted basis, that is, if no other options or warrants were exercised or 69.1% on a fully diluted basis, if all other options and warrants were exercised.

On March 22, 2019, the Company entered into an extension agreement with Glencore with respect to the secured convertible and non-convertible debt set to mature on March 31, 2019. Glencore agreed to extend the maturity date of the debt to June 30, 2019 to provide the Company time to prepare for and complete a rights offering, fully backstopped by Glencore, to raise sufficient funds to repay all outstanding debt. In connection with the extension agreement, the Company issued 6,458,001 purchase warrants to Glencore with an expiration date of March 31, 2024 and an exercise price of \$0.7368 which was approved by the NYSE American and TSX. In addition, the Company agreed to extend the expiration date of the convertible debt exchange warrant to the earlier of March 31, 2020 or the date on which the convertible debt is fully repaid, which occurred on June 28, 2019.

On June 28, 2019, Glencore purchased 430,521,941 shares under its standby commitment under the rights offering in addition to the 196,726,042 shares purchased under its rights.

On August 7, 2019, the Company issued to Glencore a promissory note in the amount of \$15.0 million with proceeds to be used for general corporate purposes. The promissory note bears interest at three month U.S. dollar LIBOR plus 6.0% and is payable on the earlier of (i) December 31, 2021 or (ii) the availability of at least \$100 million of debt or equity financing, on which date all principal and interest accrued to such date will be due and payable.

Rights Offering

On May 24, 2019, the Company filed a prospectus for an offering of rights ("Right") to holders of common shares of the Company to raise up to \$265.0 million in gross proceeds ("Rights Offering"). Every shareholder received one Right for each common share owned on June 3, 2019, the Record Date, and each Right entitled the holder to acquire 2.119069 new common shares of the Company at \$0.3881 per share. This offering of Rights expired on June 26, 2019.

Under the terms of a Standby Purchase Agreement, Glencore agreed to purchase any common shares not subscribed for by holders of Rights, subject to certain conditions. Because the Rights Offering was not fully subscribed, Glencore purchased 430,521,941 shares under its standby commitment in addition to the 196,726,042 shares purchased under Glencore's Rights.

Upon closing of the Rights Offering on June 28, 2019, the Company issued a total of 682,813,838 common shares for gross proceeds of \$265.0 million. Expenses and fees relating to the Rights Offering were \$11.953 million, including the \$7.690 million standby commitment fee paid to Glencore, and reduced the gross proceeds recorded as share capital. Closing of the Rights Offering triggered customary anti-dilution provisions for outstanding warrants, share options, and unissued restricted share units. Proceeds of the Rights Offering were used to repay the convertible debt of \$58.881 million owed to Glencore and non-convertible debt of \$190.437 million owed to Glencore. The Company and Glencore agreed to net settle Glencore's Rights Offering subscription amount of \$243.435 million against the debt amounts owed.

The prospectus stated the proceeds of the Rights Offering were to be used as follows: (a) repayment of the Glencore debt upon closing of the Rights Offering at a cost of approximately \$251.310 million (b) payment of rights offering standby fee to Glencore at a cost of approximately \$7.690 million, and (c) payment of other rights offering expenses at a cost of approximately \$6.000 million.

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As at June 30, 2019, approximate proceeds usage from the Rights Offering was as follows:

<u>Purpose</u>	<u>Planned</u>	<u>Actual To Date</u>	<u>Variance</u>
Rights Offering Proceeds	265,000	265,000	-0-
Repay Glencore Debt	(251,310)	(250,318)	992 ⁽¹⁾
Rights Offering Standby Fee	(7,690)	(7,690)	-0-
Rights Offering Expenses	(6,000)	(4,263)	1,737 ⁽²⁾
TOTAL	-0-	2,729	2,729 ⁽³⁾

(1) Rights offering closed and debt repaid sooner than planned due to expedited Hart-Scott-Rodino approval.

(2) Expenses lower than planned.

(3) Remaining funds to be used for general corporate purposes.

Land Financing

During the six months ended June 30, 2019, the Company issued 52,500 shares (June 30, 2018 – 76,250 shares) to maintain land purchase options with the shares valued at \$0.036 million (June 30, 2018 - \$0.076 million).

Other Financings

During the six months ended June 30, 2019 the Company issued 400,171 shares (June 30, 2018 – 125,000 shares) pursuant to the exercise of share options for proceeds of \$0.274 million (June 30, 2018 - \$0.091 million).

During the six months ended June 30, 2019 the Company issued nil shares (June 30, 2018 – 90,500 shares) pursuant to the exercise of warrants for proceeds of \$nil (June 30, 2018 - \$0.090 million).

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Summary of Quarterly Results

(All figures in thousands of U.S. dollars, except loss per share)

	Period Ended							
	Jun 30, 2019	Mar 31, 2019	Dec 31, 2018	Sep 30, 2018	Jun 30, 2018	Mar 31, 2018	Dec 31, 2017	Oct 31, 2017
General and Administrative	(1,021)	(2,744)	(1,529)	(1,262)	(1,509)	(2,770)	(1,584)	(1,193)
Other Income (Expenses)	111	(3,074)	(1,380)	(426)	(1,147)	(5,020)	(350)	(1,058)
Loss for the Period	(910)	(5,818)	(2,909)	(1,688)	(2,656)	(7,790)	(1,934)	(2,251)
Loss per Share ⁽¹⁾	(0.00)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)
Cash provided by (used in) operating activities	1,640	(1,897)	(1,804)	(512)	(1,164)	(2,322)	(748)	(914)
Cash provided by financing activities	2,713	62	45,500	61	19,723	4,804	-	14,917
Cash used in investing activities	(4,488)	(5,721)	(36,794)	(10,178)	(5,383)	(4,998)	(3,569)	(6,997)

⁽¹⁾ Loss per share amounts may not reconcile due to rounding differences.

The loss for the period includes share-based compensation for the period ended:

June 30, 2019 - \$0.109 million	June 30, 2018 - \$0.276 million
March 31, 2019 - \$1.189 million	March 31, 2018 - \$1.179 million
December 31, 2018 - \$0.105 million	December 31, 2017 - \$0.223 million
September 30, 2018 - \$0.182 million	October 31, 2017 - \$0.283 million

Results fluctuate from period to period based on NorthMet development, corporate activities, and non-cash items. Additional discussion of significant items is included below.

Three months ended June 30, 2019 compared to three months ended June 30, 2018

Focus during the three months ended June 30, 2019 was on monitoring and compliance, maintenance of existing infrastructure, early works to prepare the site for construction, and financing.

a) Loss for the Period:

During the current year period, the Company incurred a loss of \$0.910 million (\$0.00 loss per share) compared to a loss of \$2.656 million (\$0.01 loss per share) during the prior year period. The improvement was primarily due to lower finance costs and a non-cash loss on the land exchange in the prior year period.

b) Cash Flows for the Period:

Cash provided by operating activities during the current year period was \$1.640 million compared to cash used in the prior year period of \$1.164 million. The variance in cash was primarily due to a larger increase in accounts payable and accruals in the current year period compared with the prior year period.

Cash provided by financing activities during the current year period was \$2.713 million compared to cash used in the prior year period of \$19.723 million. The decrease was primarily due to debenture funding in the prior year period.

Cash used in investing activities during the current year period was \$4.488 million compared to cash used in the prior year period of \$5.383 million. The decrease was primarily due to disposal of scrap in the current year period.

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Including the effect of foreign exchange, total cash on hand decreased during the current year period by \$0.137 million to \$6.165 million compared to the prior year period where cash increased by \$13.180 million to \$17.595 million.

c) Capital Expenditures for the Period:

During the current year period, the Company capitalized \$14.805 million of mineral property, plant and equipment costs related to the acquisition, development and preservation of the NorthMet Project and other fixed assets as compared to \$7.839 million during the prior year period. The increase is primarily due to a decrease in the market risk-free interest rate used to discount the environmental rehabilitation provision resulting in an increase to the asset (compared to the opposite effect in the prior year period) and an increase in capitalized borrowing costs.

Six months ended June 30, 2019 compared to six months ended June 30, 2018

Focus during the six months ended June 30, 2019 was on permitting the NorthMet Project, maintenance of existing infrastructure, early works to prepare the site for construction, and financing.

a) Loss for the Period:

During the current year period, the Company incurred a loss of \$6.728 million (\$0.02 loss per share) compared to a loss of \$10.446 million (\$0.03 loss per share) during the prior year period. The improvement was primarily due to a lower non-cash loss on debenture refinancing in the current year period compared to the prior year and a non-cash loss on the land exchange in the prior year period.

b) Cash Flows for the Period:

Cash used in operating activities during the current year period was \$0.257 million compared to cash used during the prior year period of \$3.486 million. The variance in cash was primarily due to a larger increase in accounts payable and accruals in the current year period compared with the prior year period.

Cash provided by financing activities during current year period was \$2.775 million compared to cash provided during the prior year period of \$24.527 million. The decrease was primarily due to debenture funding in the prior year period.

Cash used in investing activities during the current year period was \$10.209 million compared to cash used during the prior year period of \$10.381 million. The decrease was primarily due to disposal of scrap in the current year period.

Including the effect of foreign exchange, total cash on hand decreased during the current year period by \$7.692 million to \$6.165 million compared to the prior year period where cash increased \$10.664 million to \$17.595 million.

c) Capital Expenditures for the Period:

During the current year period, the Company capitalized \$30.950 million of mineral property, plant and equipment costs related to the acquisition, development and preservation of the NorthMet Project and other fixed assets as compared to \$14.169 million during the prior year period. The increase is primarily due to a decrease in the market risk-free interest rate used to discount the environmental rehabilitation provision resulting in an increase to the asset (compared to the opposite effect in the prior year period) and an increase to capitalized borrowing costs.

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Liquidity and Capital Resources

Liquidity risk is the risk the Company will not be able to meet its financial obligations as they become due and arises through the excess of financial obligations over financial assets due at any point in time. As at June 30, 2019, PolyMet had cash of \$6.165 million and a working capital deficiency of \$3.007 million. On August 7, 2019, the Company issued to Glencore a promissory note in the amount of \$15.0 million with proceed to be used for general corporate purposes. See additional details in the “Financing Activities” section above.

Management believes, based upon the underlying value of the NorthMet Project, the receipt of all permits necessary to construct and operate the NorthMet Project, ongoing discussions with potential financiers, and the majority shareholder relationship with Glencore, that financing will continue to be available to allow the Company to complete the development of NorthMet and generate future profitable operations. While in the past the Company has been successful in closing financing agreements, there can be no assurance it will be able to do so again.

The Company is in discussions with commercial banks and other sources of debt and equity finance sufficient to fund construction of the Project. Construction and ramp up to commercial production is anticipated to take approximately thirty months from receipt of construction funding.

In addition to items described elsewhere in the financial statements, as at June 30, 2019, the Company had firm commitments related to financial assurance obligations, compliance and land options of approximately \$16.609 million with approximately \$0.237 million due over the next year and the majority due over a period of three to ten years.

Financial Instruments and Risk Management

The fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described below:

- Level 1 – Quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2 – Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly; and
- Level 3 – Inputs for the asset or liability that are not based on observable market data.

Financial instruments measured at fair value subsequent to recognition include the restricted deposits which are measured at fair value through profit or loss using Level 1 inputs resulting in a carrying value of \$10.097 million (December 31, 2018 - \$nil), the receivable from EIP which is measured at fair value through profit or loss using Level 3 inputs resulting in a carrying value of \$2.010 million (December 31, 2018 - \$1.912 million) and accruals representing expected payments to settle restricted share units measured at fair value through profit or loss using Level 2 inputs resulting in a carrying value of \$0.402 million (December 31, 2018 - \$0.371 million).

The fair values of cash, restricted deposits, other current amounts receivable, and accounts payable and accruals approximate their carrying amounts due to their short-term nature.

PolyMet Mining Corp. Management Discussion and Analysis

As at June 30, 2019 and for the three and six months ended June 30, 2019

Tabular amounts in thousands of U.S. Dollars, except for shares and per share amounts

Liquidity Risk

Liquidity risk is the risk the Company will not be able to meet its financial obligations as they become due and arises through the excess of financial obligations over available financial assets due at any point in time. The Company's objective in managing liquidity risk is to maintain sufficient readily available reserves in order to meet its liquidity requirements at any point in time and is achieved by maintaining sufficient cash. See additional discussion in the "Liquidity and Capital Resources" section above.

Related Party Transactions

The Company conducted transactions with senior management, directors and persons or companies related to these individuals, and paid or accrued amounts as follows:

	Six months ended	
	June 30, 2019 ⁽¹⁾	June 30, 2018 ⁽²⁾
Salaries and other short-term benefits	\$ 1,589	\$ 1,291
Other long-term benefits	29	28
Share-based payment ⁽³⁾	1,509	1,373
Total	\$ 3,127	\$ 2,692

(1) Six months ended June 30, 2019 includes Directors (Dennis Bartlett, Jonathan Cherry, Mike Ciricillo, David Dreisinger, W. Ian L. Forrest, Helen Harper, Alan Hodnik, Stephen Rowland and Michael Sill) and senior management (Jonathan Cherry, Patrick Keenan and Bradley Moore).

(2) Six months ended June 30, 2018 includes Directors (Dennis Bartlett, Jonathan Cherry, Mike Ciricillo, David Dreisinger, W. Ian L. Forrest, Helen Harper, Alan Hodnik, Stephen Rowland and Michael Sill) and senior management (Jonathan Cherry, Patrick Keenan and Bradley Moore).

(3) Share-based payment represents the amount expensed during the period.

There are agreements with senior management (Jonathan Cherry, Patrick Keenan and Bradley Moore) containing severance provisions for termination without cause or in the event of a change in control. No other PolyMet director has an agreement providing for benefits upon termination.

As a result of Glencore's 71.6% ownership and majority shareholder relationship Glencore is also a related party. In addition to the transactions described in the "Financing Activities" section above, the Company has entered into a Technical Services Agreement with Glencore whereby the Company reimburses Glencore for NorthMet technical support costs requested under an agreed scope of work, primarily in detailed project design and mineral processing. During the six months ended June 30, 2019, the Company recorded \$0.100 million (June 30, 2018 - \$nil) for services under this agreement.

PolyMet Mining Corp.

Management Discussion and Analysis

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Tabular amounts in thousands of U.S. Dollars, except for shares and per share amounts

Off Balance-Sheet Arrangements

The Company does not utilize off-balance sheet arrangements.

Proposed Transactions

There are no proposed asset or business acquisition/disposition transactions that will materially affect the performance of the Company.

Critical Accounting Estimates and Judgments

The preparation of the consolidated financial statements in conformity with IFRS requires the use of certain critical accounting estimates. These critical accounting estimates require management to make judgments and estimates that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities as at the date of the financial statements.

Critical accounting estimates and judgments used in the preparation of the condensed interim consolidated financial statements are as follows:

Determination of mineral reserves

Reserves are estimates of the amount of product that can be economically and legally extracted from the Company's property. In order to estimate reserves, estimates are required about a range of geological, technical and economic factors, including quantities, production techniques, production costs, capital costs, transport costs, demand, prices and exchange rates. Estimating the quantity of reserves requires the size, shape and depth of deposits to be determined by analyzing geological data. This process may require complex and difficult geological judgments to interpret the data. In addition, management will form a view of forecast sales prices, based on current and long-term historical average price trends. Changes in the proven and probable reserves estimates may impact the carrying value of property, plant and equipment, rehabilitation provisions, recognition of deferred tax amounts and depreciation, depletion and amortization.

Provision for Environmental Rehabilitation Costs

Provisions for environmental rehabilitation costs associated with mineral property, plant and equipment, are recognized when the Company has a present legal or constructive obligation that can be estimated reliably, and it is probable an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax risk-free rate that reflects current market assessments of the time value of money.

The Company's estimates of its ultimate environmental rehabilitation liabilities could be affected by changes in regulations, changes in the extent of environmental rehabilitation required, changes in the means of rehabilitation, changes in the extent of responsibility for the financial liability, changes in operating plans, or changes in cost estimates. The operations of the Company may in the future be affected from time to time in varying degrees by changes in environmental regulations, including those for future removal and site restoration costs. Both the likelihood of new regulations and their overall effect upon the Company may vary greatly and are not predictable.

The Company's provision for environmental rehabilitation cost obligations represents management's best estimate of the present value of the future cash outflows required to settle the liability.

PolyMet Mining Corp. Management Discussion and Analysis

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Other MD&A Requirements

Outstanding Share Data

Authorized Capital: Unlimited common shares without par value.

The following table summarizes the outstanding share information as at August 9, 2019:

Type of Security	Number Outstanding	Weighted Average Exercise Price
Issued and outstanding common shares ⁽¹⁾	1,005,129,166	\$ -
Restricted share units	4,567,444	\$ -
Share options	25,332,002	\$ 0.78
Share purchase warrants	31,379,179	\$ 0.80

(1) Includes 95,500 of restricted shares which vest upon production.

As at June 30, 2019, the Company had obligations to issue up to 3,640,000 shares under the Company's bonus share incentive plan upon achievement of Milestone 4 representing commencement of commercial production at NorthMet at a time when the Company has not less than 50% ownership interest in NorthMet. At the Company's Annual General Meeting of shareholders held in June 2008, the disinterested shareholders approved issuance of these shares upon achievement of Milestone 4. Regulatory approval is also required prior to issuance of these shares.

Risks and Uncertainties

An investment in the Company's common shares is highly speculative and subject to a number of risks and uncertainties. Only those persons who can bear the risk of the entire loss of their investment should participate. An investor should carefully consider the risks described in PolyMet's Annual Information Form for the year ended December 31, 2018 and other information filed with both the Canadian and United States securities regulators before investing in the Company's common shares. The risks described in PolyMet's Annual Information Form are not the only ones faced. Additional risks that the Company currently believes are immaterial may become important factors that affect the Company's business. If any of the risks described in PolyMet's Annual Information Form for the twelve months ended December 31, 2018 occur, the Company's business, operating results and financial condition could be seriously harmed and investors could lose all of their investment.

Evaluation of Disclosure Controls and Procedures

The Company's Chief Executive Officer and Chief Financial Officer have evaluated the effectiveness of the Company's disclosure controls and procedures (as such term is defined in Rules 13(a)-15(e) and 15(d)-15(e) under the US Exchange Act and the rules of the Canadian Securities Administrators as at December 31, 2018 (the "Evaluation Date"). Based on such evaluation, such officers concluded that, as of the Evaluation Date, the Company's disclosure controls and procedures are effective. Such disclosure controls and procedures are designed to ensure that the information required to be disclosed by the Company in reports that it files or submits to the US Securities and Exchange Commission and the Canadian Securities Administrators is recorded, processed, summarized and reported within the time periods specified in applicable rules and forms, and includes controls and procedures designed to ensure information relating to the Company required to be included in reports filed or submitted under Canadian and United States securities legislation is accumulated and communicated to the Company's management to allow timely decision regarding disclosure.

PolyMet Mining Corp.
Management Discussion and Analysis

As at June 30, 2019 and for the three and six months ended June 30, 2019
Tabular amounts in thousands of U.S. Dollars, except for shares and per share amounts

There have been no changes in the Company's disclosure controls and procedures during the six month period ended June 30, 2019 that have materially affected, or are reasonably likely to material affect, its disclosure controls and procedures.

Management's Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Consolidated Financial Statements for external reporting purposes in accordance with IFRS as issued by the IASB.

Internal control over financial reporting, no matter how well designed, has inherent limitations. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

There have been no changes in the Company's internal control over financial reporting during the six month period ended June 30, 2019 that have materially affected, or are reasonably likely to material affect, its internal control over financial reporting.

Additional Information

Additional information related to the Company is available on SEDAR and EDGAR, respectively, at www.sedar.com and at www.sec.gov, and on the Company's website www.polymetmining.com.