



# Dominion Diamond Announces Positive Results of Misery Deep Pre-Feasibility Study and Provides Update on Fox Deep Project at Ekati Mine

YELLOWKNIFE, NT (May 23, 2017) – Dominion Diamond Corporation (TSX: DDC, NYSE: DDC) (the “Company” or “Dominion”) is pleased to report the positive results of a pre-feasibility study (Misery Deep PFS) on the development of an underground operation below the Misery open pit at the Ekati Diamond Mine (“Ekati mine”) in the Northwest Territories of Canada. The Company is also providing an update on the Fox Deep project below the mined-out Fox open pit at the Ekati mine. The Misery and Fox kimberlite pipes are located in the Core Zone Joint Venture in which the Company has an 88.9% participating interest. Unless otherwise indicated, all amounts are presented on a 100% basis, and all financial information is presented in US dollars.

## **Highlights**

- Inaugural probable mineral reserve of 1.8 million tonnes and 8.7 million carats at Misery Deep
- Positive pre-feasibility study on Misery Deep project, based on underground sublevel retreat mining method, with incremental post-tax net present value of \$92 million (Dominion’s share) and internal rate of return of 40%
- Misery Deep enhances production profile at Ekati mine from fiscal 2020 to 2023, with initial capital development of \$94 million, 8.7 million carats recovered, and a construction decision expected June 2017
- Ekati mine life extended from fiscal 2034 to fiscal 2035
- Misery pipe continues to produce outstanding large fancy yellow diamonds, providing upside to modelled diamond prices
- Recently recovered “Arctic Sun” diamond is largest fancy yellow stone recovered to date in North America at 65.93 rough carats, with estimated polished value of \$5 million
- Preliminary economic assessment (PEA) on Fox Deep project expected in third quarter of fiscal 2018, and pre-feasibility study scheduled for late fiscal 2018

*“Our exciting high-return Misery Deep project, with a post-tax IRR of 40%, is advancing towards development and is expected to enhance our production profile at Ekati over the medium term,”* said Jim Gowans, Chairman of the Board. *“The new mineral reserve at Misery Deep reflects the addition of high grade ore close to our existing mining operation and demonstrates the near- to longer-term upside potential at known kimberlites in the Lac de Gras district.”*

## **Misery Deep Project – Positive Pre-Feasibility Study**

The Misery Main pipe is currently in production as an open pit operation, and is expected to account for approximately 20% of tonnes processed and approximately 60% of carats recovered at the Ekati mine in fiscal 2018. The Misery Deep PFS evaluated the underground development of the Misery Main pipe as an incremental development opportunity to the existing mine plan. The net present value (NPV) calculation for Misery Deep represents the Company’s share of the incremental NPV. This analysis includes the

positive cash flow effects of the Misery Deep project and incorporates a deferral of the processing of lower value ore from the Pigeon pipe until the end of the Jay project in fiscal 2034. Inclusion of high value ore from Misery Deep enhances the production profile at the Ekati mine from fiscal 2020 to fiscal 2023 relative to the life of mine plan in the most recent technical report entitled “Ekati Diamond Mine, Northwest Territories, Canada, NI 43-101 Technical Report” which has an effective date of July 31, 2016. It also extends the mine life at the Ekati mine from fiscal 2034 to fiscal 2035.

In 2016, Dominion completed a pre-feasibility study on the Sable project and a feasibility study on the Jay project. These studies demonstrated that the Ekati mine life will extend beyond 2030, and that a substantial opportunity existed at the Misery pit after the completion of open pit mining and before the use of the pit as a water management facility for the Jay project.

A concept study was completed in the summer of 2016, which resulted in the mobilization of an exploration drill rig to the Misery pit in September 2016. A 15-hole core drilling program was conducted between October 2016 and January 2017 and totaled more than 2,200 metres. The results confirmed the modelled pipe size at depth, and significantly improved grade data coverage based on historical results from reverse circulation (RC) drilling bulk samples and 2016/2017 micro-diamond analysis. Potential exists for further conversion of inferred mineral resources to indicated mineral resources at depth and would require additional drilling to improve the understanding of grade, and geotechnical and hydrogeological conditions.

The pre-feasibility study is based on the mining of Misery Deep from calendar 2018 to mid-calendar 2022. The mine plan includes the extraction of 1.8 million tonnes of kimberlite on five underground production levels, using a sublevel retreat method similar to that employed at the Koala North pipe. A total of 8.7 million carats are expected to be recovered from Misery Deep.

Dominion expects to file permit applications for the Misery Deep project in the third quarter of calendar 2017.

The Company compiled and prepared the Misery Deep PFS with the assistance of its consultant Peter Ravenscroft, FAusIMM, of Burgundy Mining Advisors Ltd. The chart below shows the incremental production, and capital and operating costs at the Misery Deep project:

### Misery Deep Pre-Feasibility Study Key Financial and Project Highlights

Mining Method	Sublevel retreat (SLR)
Mined Kimberlite	1.8 million tonnes
Recovered Carats	8.7 million carats
Recovered Grade	4.8 carats per tonne <sup>1</sup>
Diamond Recovery	89% <sup>2</sup>
Initial Development Capital	\$94 million <sup>3</sup>
Sustaining Capital	\$9 million <sup>3</sup>
Unit Operating Cost	\$71 per tonne mined <sup>3</sup>
Base Case Diamond Price	\$59 per carat <sup>4</sup>
First Production Date	Calendar 2019
Mine Operational Life	4 years
Post-tax NPV (incremental)	\$92 million <sup>5</sup>
Real Discount Rate	7%
Post-tax IRR (incremental)	40% <sup>5</sup>

Note: All dollar figures refer to real 2017 dollars and, except for NPV and IRR, are on a 100% basis. Tonnes refer to dry metric tonnes.

<sup>(1)</sup> The recovered grade is at 1.0 mm cut-off and includes contribution of additional carats from the fines dense media separation (“Fines DMS”) unit in the Ekati processing plant.

- (2) Recovery relative to mineral resource reported at +0.5 mm cut-off (based upon diamonds that would be recovered by the Ekati bulk sample plant using 0.5 mm width slot de-grit screens).
- (3) Assumes an exchange rate of 1.33 CAD/USD in calendar 2017 and thereafter. Initial development capital includes a \$15 million contingency. Sustaining capital excludes an amount of \$12 million associated with processing of deferred Pigeon ore at the end of the mine life. Unit operating cost refers to average unit direct mining cost.
- (4) Based on the Company's December 2016 Price Book. The rough diamond price forecasts for the Misery Deep PFS include 2.5% per annum real price growth during the life of the mine; real price growth of nil and 3.5% would result in a post-tax NPV of \$71 million and \$101 million, respectively (Dominion's share).
- (5) Company's share of unlevered NPV and project IRR are after taxes and royalties.

## Diamond Price Assumptions

The base case diamond price is approximately \$59 per carat (in 2017 dollars) in the Misery Deep PFS. Pricing is based on the December 2016 Price Book and 89% recovery relative to the mineral resource. The Misery Deep PFS includes additional diamond recovery in the lower value smaller size categories as a result of the Company's previously-announced commissioning of the Fines DMS unit in the Ekati processing plant, which lowers the average recovered price, but increases total project revenue.

## Capital Expenditure Assumptions

The Misery Deep project will require the addition of infrastructure including expansion of the existing Misery camp, additional compressed air supply, refurbishment of the existing shotcrete plant, a fresh air raise ventilation system from surface, tie in of the electrical distribution system to the Misery substation and expansion of the existing water management system. The following chart sets out the estimated capital expenditures by fiscal year for the Misery Deep project:

Fiscal Year	2018	2019	2020
Initial Development Capital (\$ Millions)	6	69	19

The initial capital development will be required for the additional infrastructure, mobilization of a mining contractor, and pre-production development mining.

## Production Assumptions

The Misery Deep PFS is based on the following production assumptions:

Fiscal year	2020	2021	2022	2023
Tonnes Processed (Millions)	0.4	0.6	0.6	0.2
Grade (Carats per Tonne)	4.5	4.8	4.0	4.9
Carats Recovered (Millions)	1.7	3.0	2.9	1.1

Note: Totals may not add up due to rounding.

To accommodate the processing of Misery Deep ore in fiscal years 2020 to 2022, the study assumed that approximately 1.6 million tonnes of Pigeon ore, with an associated 0.8 million recovered carats, will be mined according to the existing life of mine plan, stockpiled and deferred from the processing plan until fiscal years 2034 and 2035. The Pigeon pipe is currently in production, and is located in the Core Zone. The following chart sets out the expected deferrals by fiscal year from the Pigeon pipe:

Fiscal Year	2020	2021	2022
Ore Feed (Million Tonnes)	0.4	0.6	0.6
Carats Recovered (Million Carats)	0.2	0.3	0.3

The Misery Deep PFS shows the potential for an increase in total carats produced at the Ekati mine in fiscal 2020 to a level similar to that expected in fiscal years 2018 and 2019. Current guidance for carats produced on a 100% basis in the Operating Case<sup>1</sup> at the Ekati mine is 6.3 to 7.0 million carats in fiscal 2018, 6.4 to 7.1 million carats in fiscal 2019 and 5.0 to 5.6 million carats in fiscal 2020. There is also potential for production in the 5 million carats per annum range, on a 100% basis in the Operating Case, in fiscal years 2021 to 2023.

- (1) Operating Case at the Ekati mine includes the recovery of between 1.3 and 1.4 million carats in fiscal 2018, and between 1.4 and 1.5 million carats in fiscal 2019, from the Misery Southwest pipe which is currently an inferred mineral resource. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Inferred mineral resources are considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. There is no certainty that the Operating Case will be realized.

## Mineral Reserve and Mineral Resource Estimates

The Misery Deep project has probable mineral reserves of 1.8 million tonnes and 8.7 million carats, included in indicated mineral resources of 2.6 million tonnes and 13.7 million carats. The tables below summarize the mineral reserves and mineral resources, expressed in millions of tonnes (Mt), carats per tonne (cpt) and millions of carats (Mct).

### Misery Deep Mineral Reserves as of May 23, 2017 (100% basis)

Zone	Type	Proven Mineral Reserve			Probable Mineral Reserve		
		Mt	cpt	Mct	Mt	cpt	Mct
Core	UG	-	-	-	1.8	4.8	8.7

### Misery Deep Mineral Resources as of May 23, 2017 (100% basis)

Zone	Type	Measured Mineral Resource			Indicated Mineral Resource			Inferred Mineral Resource		
		Mt	cpt	Mct	Mt	cpt	Mct	Mt	cpt	Mct
Core	UG	-	-	-	2.6	5.3	13.7	0.3	4.0	1.3

Notes:

- (1) Mineral resources are inclusive of mineral reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability.
- (2) Mineral reserves and mineral resources are reported in accordance with CIM Definition Standards.
- (3) Dominion is operator and has an 88.9% participating interest in the Core Zone Joint Venture area.
- (4) The reference point for the definition of mineral reserves is at the point of delivery to the process plant.
- (5) Mineral resources are reported at +0.5 mm cut-off (based upon diamonds that would be recovered by the Ekati bulk sample plant using 0.5 mm width slot de-grit screens).
- (6) Mineral reserves are reported at +1.0 mm cut-off (based upon diamonds that would be recovered by the Ekati bulk sample plant utilizing 1.0 mm slot de-grit screens, and equivalent to the current Ekati process plant recovery, inclusive of the Fines DMS circuit). Overall estimated process plant diamond recovery for Misery Main kimberlite relative to resource grade is 89%.
- (7) Mineral reserves will be mined using an underground method assuming initial dilution of 8.4% and mining recovery of 88% relative to the mineral resource.

## Next Steps

The Company plans to make a final construction decision on the project in June. In line with the recommendations in the Misery Deep PFS, in the third quarter of calendar 2017, the Company will initiate the permitting process for the project, and begin detailed engineering and procurement activities. Mobilization of contractors and mining equipment is anticipated on the calendar 2018 winter road. Development work is expected to span four years, with initial ore production from development in fiscal

2020, and with commercial production starting in fiscal 2021. The Company does not plan to complete a stand-alone feasibility study for the Misery Deep project.

### **“Arctic Sun” – Large Fancy Yellow Diamond**

The Misery pipe has produced a number of high value fancy yellow and orange diamonds with valuations ranging from \$10,000 to \$150,000 per carat. The “Arctic Sun” is a 65.93 carat fancy yellow diamond recovered from the Misery Main pipe during the ramp up of production after the restart of the process plant at the Ekati mine in the fall of 2016. The Company partnered with a client to create a 30.54 carat fancy vivid yellow VS1 polished diamond with an estimated value of \$5 million. The “Arctic Sun” is the largest fancy yellow stone recovered to date in North America, and will be unveiled at the JCK Las Vegas annual trade show in June. Large fancy diamonds represent potential upside to the modelled pricing for the Misery pipe.

### **Fox Deep Project Update**

On February 22, 2017, the Company announced the results from an RC drilling campaign at Fox Deep in the winter/spring of 2016. The resource model, updated with new data from the 2016 drilling campaign, confirmed the continuity of the resource at depth and identified a deep higher grade zone. As disclosed on April 12, 2017, the indicated mineral resource increased substantially to 45.6 million tonnes and 16.5 million carats as at January 31, 2017, from the previous estimates of 35.2 million tonnes and 11.6 million carats, respectively.

Based on the positive results of the RC drilling program, a pre-feasibility study on Fox Deep was initiated. Work on an updated mine design is now underway based on an incline caving method. Incline caving has been used successfully at the Koala underground operation at the Ekati mine. This method has been identified as the most appropriate one to achieve increased height of draw, a lower extraction level, and access to the higher-grade zone identified at depth in the 2016 drill program. The incline cave design is expected to have improved geotechnical stability compared to block caving, and a potentially higher production rate due to a larger number of drawpoints. A trade-off study between shaft and ramp access to Fox Deep is in progress.

Completion of a preliminary economic analysis on the project is expected in the third quarter of fiscal 2018, and a pre-feasibility study (Fox Deep PFS) is scheduled for completion by the end of the fiscal year. If the results of the studies are positive, Fox Deep has the potential to extend the life of the Ekati mine significantly. Based on the size of the project, if the Fox Deep PFS is positive, the Company plans to issue an updated technical report for the Ekati mine after the PFS is completed. This technical report would also incorporate the Misery Deep project.



### **Qualified Person**

*The mineral reserve and mineral resource estimates for the Misery Deep project and the mineral resource estimate for the Fox Deep project were prepared and verified under the supervision of Mr. Peter Ravenscroft, FAusIMM, of Burgundy Mining Advisors Ltd., an independent mining consultancy, and a Qualified Person within the meaning of National Instrument 43-101. The other scientific and technical information contained in this press release has been prepared and verified by Dominion, operator of the Ekati mine, under the supervision of Chantal Lavoie, P. Eng., Chief Operating Officer of Dominion, and President of Dominion Diamond Ekati Corporation (DDEC), and a Qualified Person within the meaning of National Instrument 43-101 of the Canadian Securities Administrators.*

### **Forward-Looking Information**

*The information included herein that is not current or historical factual information, including information about estimated mine life and other development plans at the Ekati mine, estimated economics of the Misery Deep project, estimated reserves and resources, projected capital costs, and future diamond prices, constitutes forward-looking*

information or statements within the meaning of applicable securities laws. Forward-looking information is based on certain factors and assumptions including, among other things, the current mine plan for the Ekati mine; mining, production, construction and exploration activities at the Ekati mine; currency exchange rates; world and US economic conditions; future diamond prices; and the level of worldwide diamond production. Forward-looking information is subject to certain factors, including risks and uncertainties, which could cause actual results to differ materially from what the Company currently expects. These factors include, among other things, the uncertain nature of mining activities, including risks associated with underground construction and mining operations, risks associated with joint venture operations, risks associated with the remote location of and harsh climate at the Company's mining properties, variations in mineral reserve and mineral resource estimates, grade estimates and expected recovery rates, failure of plant, equipment or processes to operate as anticipated, risks associated with regulatory requirements and the ability to obtain all required permits, the risk of fluctuations in diamond prices and changes in US and world economic conditions, the risk of fluctuations in the Canadian/US dollar exchange rate and cash flow and liquidity risks. Actual results may vary from the forward-looking information. Readers are cautioned not to place undue importance on forward-looking information, which speaks only as of the date of this disclosure, and should not rely upon this information as of any other date. While the Company may elect to, it is under no obligation and does not undertake to, update or revise any forward-looking information, whether as a result of new information, further events or otherwise at any particular time, except as required by law. Additional information concerning factors that may cause actual results to materially differ from those in such forward-looking statements is contained in the Company's filings with Canadian and United States securities regulatory authorities and can be found at [www.sedar.com](http://www.sedar.com) and [www.sec.gov](http://www.sec.gov), respectively.

#### **About Dominion Diamond Corporation**

Dominion Diamond Corporation is a Canadian mining company and one of the world's largest producers and suppliers of premium rough diamond assortments to the global market. The Company operates the Ekati Diamond Mine, in which it owns a controlling interest, and owns 40% of the Diavik Diamond Mine, both of which are located in the low political risk environment of the Northwest Territories in Canada. It also has world-class sorting and selling operations in Canada, Belgium and India.

**For more information, please visit [www.ddcorp.ca](http://www.ddcorp.ca), or contact:**

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