Rubicon Minerals Provides an Updated Preliminary Interpretation of the Structural Geology of the F2 Gold Deposit

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TORONTO, March 12, 2018 /CNW/ - Rubicon Minerals Corporation (TSX: RMX | OTCQX: RBYCF) ("Rubicon" or the "Company") provides an updated preliminary interpretation of the structural geology of the F2 Gold Deposit (the "Preliminary Structural Interpretation") at the Phoenix Gold Project (the "Project").

Key Takeaways from the Preliminary Structural Interpretation:

- The primary structural controls on the gold mineralization at the F2 Gold Deposit are the well-established dextral Riedel vein system of quartz-actinolite veins (the "Riedel vein system") that occur within the HiTi Basalt Units (the main host rock) and the Felsic Intrusive Units (to a lesser extent).
- Elevated gold grades appear to be spatially associated with the R' veins within the Riedel vein system and the multiple Quartz Breccia Zones, which share the same geometry as the R' veins.
- The Preliminary Structural Interpretation appears to show more continuity of gold mineralization within the HiTi Basalt Units compared to the 2016 structural interpretation, with the main difference being the identification of the Riedel vein system.
- In the 2016 structural interpretation, the discrete D2 east-west shear zones (previously termed as the "D2 structures") were interpreted as the main controls of high-grade gold mineralization at the F2 Gold Deposit. However, in the Preliminary Structural Interpretation, these discrete D2 east-west share zones appear to be localized, discontinuous, and not seen as having significant controls on the gold mineralization at the deposit.
- The Preliminary Structural Interpretation has simplified and improved future modelling and allows for the evaluation of bulk mining methods.

CEO's Comments

Rubicon President and Chief Executive Officer George Ogilvie, P.Eng., stated, "the Preliminary Structural Interpretation provides an encouraging step towards advancing our understanding of the F2 Gold Deposit at the Phoenix Gold Project. The Preliminary Structural Interpretation benefits from the data and observations we collected in 2017 from the detailed mapping, oriented drilling, and core re-logging, which, collectively, provide critical information that was not available when the previous 2016 structural interpretation and geological model were developed. The Preliminary Structural Interpretation simplifies our understanding of the F2 Gold Deposit, bringing to light the gold-bearing Riedel vein system, which appears to create more continuity of gold mineralization within the HiTi Basalt Units when compared to the 2016 geological model."

"We will continue to refine and support the Preliminary Structural Interpretation from the data and observations we plan to collect from our 2018 Exploration Program. Underground development at site is progressing well. We are continuing to stockpile low-grade material on surface, which will be used for bedding for our mill before we process higher-grade mineralized material from the test stopes."

"We are on track to commence the processing of mineralized material from the test stopes in mid-2018. We are currently blasting the #977 test stope, production drilling the #015 test stope, and developing the #161 test stope. We remain on schedule to provide an updated geological model and Mineral Resource Estimate in the second half of 2018."

Preliminary Structural Interpretation Details

Rubicon and its consultants, Golder Associates Ltd., Terrane Geoscience Inc. and T. Maunula and Associates (together, "Consultants"), have developed the Preliminary Structural Interpretation. The Preliminary Structural Interpretation has not been finalized; it will continue to be refined, enhanced, and supported with data and observations collected from the 2018 Exploration Program, prior to potentially serving as the basis of an updated geological model and Mineral Resource Estimate. The Preliminary Structural Interpretation utilizes historical data and benefits from the additional data and observations collected from the Company's 2017 Exploration program, including more than 10,000 metres ("m") of historical core re-logging for structural geology, more than 3,500 m of targeted oriented structural drilling, over 20,000 m of infill and step-out drilling (which included an additional 6,500 m of oriented drilling), and detailed underground mapping on the 183-, 244-, and 305-metre levels. The 2017 Exploration Program

included oriented drilling in both the north and east directions (all orientations referenced are relative to mine grid; mine grid north is oriented 45 degrees east of true north) to allow for evaluation of both north-south ("N-S") and east-west ("E-W") oriented structures and associated trends in gold mineralization.

Host Rock

The local geology in the F2 Gold Deposit area appears to comprise of a series of N-S trending, steeply dipping to sub-vertical alternating volcanic units of talc-altered komatiitic ultramafic flows ("Ultramafic Flow Units") and biotite and silica altered basaltic mafic volcanic flows ("HiTi Basalt Units"). There are three predominant HiTi Basalt lenses that comprise the F2 Gold Deposit (from west to east, mine-grid): The Hanging Wall Basalt, the West Limb Basalt, and the F2 Basalt. These volcanic units were later intruded by a series of quartz-feldspar porphyry felsic dykes and sills ("Felsic Intrusive Units") as well as less abundant intermediate and mafic dykes and sills.

The geometry and distribution of the HiTi Basalt lenses are a result of regional scale deformation events, resulting in the boudinage (the stretching and brittle-ductile deformation of more competent units relative to ductile deformation of surrounding less competent units) of the HiTi Basalt lenses in the N-S direction.

Please see Diagrams 1 and 2 for the conceptual images of the local geology of the F2 Gold Deposit, plan and section views.

Deformation History

Similar to the 2016 structural geological interpretation, the updated Preliminary Structural Interpretation recognizes three primary deformation events associated with the F2 Gold Deposit, which include:

- D1: Regional shortening related to thrusting and folding.
- D2: Dextral transpression (right lateral oblique sense of shear due to a component of shortening perpendicular to the shear plane) along the regional scale N-S oriented East Bay Deformation Zone. This is the main deformation event associated with gold mineralization.
- D3: Regional folding related to a later broad open fold with a N-S trending, sub-horizontal fold axis.

Please see Diagram 3 for a conceptual summary of the deformation events and related structural elements that comprise the Preliminary Structural Interpretation. While the D1 and D3 deformation events are important for understanding the initial structural modification of the deposit stratigraphy and the present-day geometry of the deposit, respectively, the D2 deformation event represents the main deformation event associated with gold mineralization at the F2 Gold Deposit.

Rubicon and its Consultants believe that the strain partitioning (heterogeneous distribution of strain type and intensity due to the variability in composition, mechanical properties, pre-existing deformation features and geometry of geological units or domains) during the D1 and D2 deformation resulted in the ductile deformation of the talc-rich Ultramafic Flow Units and the brittle-ductile deformation of the more resistant HiTi Basalt and Felsic Intrusive Units. The ductile behaviour of the Ultramafic Flow Units resulted in the generation of the pervasive N-S oriented, steeply dipping to sub-vertical S1 penetrative foliation during the D1 deformation event. The brittle-ductile behaviour of the HiTi Basalt Units resulted in the boudinage of these units, with the primary stretching direction paralleling the N-S orientation, with a lesser vertical component of stretching such that the boudin necks that bound the HiTi Basalt lenses are arranged in both N-S, shallowly dipping and sub-vertical orientations.

Structural Controls on Gold Mineralization

The 2016 structural interpretation and the Preliminary Structural Interpretation are similar in that the high-grade gold mineralization is associated with structural features during the D2 deformation event. However, there appears to be significant differences in terms of the key controlling features and resultant geometries between the two interpretations.

The 2016 structural interpretation identified the D2 E-W oriented shear zones (previously termed as the "D2

structures") cutting across the deposit as the primary structural feature controlling the gold mineralization at the F2 Gold Deposit. Please see Diagram 4 for a conceptual summary of the 2016 structural interpretation. Modelled gold mineralization trends were generally oriented N-S, in part due to the predominant E-W orientation of most drill holes drilled prior to the 2017 Exploration Program.

Data and observations collected from the 2017 detailed underground mapping and oriented core drilling programs indicate that, while D2 E-W oriented shear zones and brittle faults do exist, they are generally more localized and discontinuous in both their lateral and vertical extents than previously interpreted. They do not appear to represent deposit-scale features. Additionally, the D2 E-W oriented shear zones are not necessary to explain the geometry and continuity of the HiTi Basalt Unit panels and the Felsic Intrusive Units, or the gold mineralization hosted within these units.

The updated Preliminary Structural Interpretation identifies the Riedel vein system as the primary structural control on gold mineralization at the F2 Gold Deposit. The Riedel vein system is interpreted to have occurred during D2 regional dextral transpression. The gold mineralization occurs in association with disseminated sulphide replacement and vein mineralization, both of which developed in the more competent HiTi Basalt Units, and, to a lesser degree, in the Felsic Intrusive Units. The 2017 drilling program and subsequent new interpretation suggest that the continuity of gold mineralization within the HiTi Basalt Units is better than previously modelled. Please see Diagram 3 for a conceptual image of the Riedel vein system within the HiTi Basalt Units.

The Riedel vein system, comprised of the R', R, and P shear veins (each representing a different orientation; see bottom left quadrant of Diagram 3 for further details), and the Quartz-Breccia Zones, all host gold mineralization. The highest gold grades generally occur within the R' veins and the Quartz-Breccia Zones (both share the same E-W striking, sub-vertical dipping geometry), located in the thickest portions of the HiTi Basalt Units. The Quartz-Breccia Zones are interpreted to have developed as multiple opening and sealing events of the E-W striking sub-vertical R' veins. A possible explanation for the development of the R' veins related to the Quartz-Breccia Zones is that their sinistral sense of shear is opposed to the dextral bulk sense of shear, resulting in limited displacement but allowing for the development of zones of intense deformation, where the repeated fracturing and comminution of the vein and wall rock material resulted in the creation of high-porosity and permeability zones for mineralizing fluids. The thickest portions of the HiTi Basalt Unit presented both favourable structural traps for the R' veins and Quartz-Breccia Zones and chemical traps where disseminated sulphides and associated gold mineralization are developed. These areas are the focus of the Company's future exploration efforts. Table 1 below summarizes the key differences between the 2016 structural interpretation and the Preliminary Structural Interpretation.

Table 1: Apparent Key Differences between the 2016 Structural Interpretation and the 2018 Preliminary Structural Interpretation

	2016 Structural Interpretation
Host Rock	HiTi Basalt Units (main); Felsic Intrusive Units (lesser extent); Used multiple descriptors for lithological units.
Continuity and geometry of HiTi Basalt Units	HiTi Basalt Units modelled as relatively continuous and constant thickness panels of basalt offset b shear zones and late-brittle faulting.
Structural controls on gold mineralization	Discrete D2 E-W shear zones; Quartz-Breccia Zones (1 zone).
Continuity of gold mineralization	Discontinuous within the HiTi Basalt Units, associated with vein and sulphide replacement mineraliz proximity to discrete D2 E-W shear zones

Potential Impact of Preliminary Structural Interpretation

The Preliminary Structural Interpretation has a few potential implications with regard to an updated geological model and how the Company views the F2 Gold Deposit:

- Potential simplification of the geological model: As alluded to in prior news releases, the 2016 geological model had multiple descriptors for lithological units, which didn't necessarily match with what was observed from the data collected in 2017. The Preliminary Structural Interpretation has grouped and simplified the lithological descriptors into three main units consisting of the main HiTi Basalt Units, Felsic Intrusive Units and Ultramafic Flow Units.

- The appropriate modelling of the Riedel vein system and its focus for future exploration: The Preliminary Structural Interpretation, based on data and observations from the detailed underground mapping and oriented core drilling in 2017, recognizes that the Riedel vein system, which include the higher-grade R' veins and Quartz-Breccia Zones, were either non-existent or not adequately captured in the 2016 structural interpretation. These areas are the focus of future exploration efforts. The Preliminary Structural Interpretation shows a more continuous mineralized envelope compared to the 2016 geological model.

- Evaluating the amenability of bulk mining: Upon review of the Preliminary Structural Interpretation, along with the current understanding of the distribution of the gold mineralization within the deposit, the Company and its Consultants are evaluating whether bulk mining methods are more amenable to the F2 Gold Deposit compared to narrow-vein, selective methods. The planned test mining in 2018 will provide more direction on the potential predominant mining methods.

As mentioned, the Preliminary Structural Interpretation has not been finalized and will continue to be refined and enhanced with data and observations collected from the 2018 Exploration Program.

Qualified Persons and Quality Assurance and Quality Control (QA/QC)

The content of this news release has been read and approved by George Ogilvie, P.Eng., President and CEO for Rubicon, and Jerry DeWolfe, P.Geo., M.Sc. and Brian Thomas, P.Geo. for Golder Associates Ltd. All three are Qualified Persons as defined by NI 43-101.

Underground drilling was conducted by Boart Longyear Drilling of Haileybury, Ontario and was supervised by the Rubicon exploration team. Oriented core drilling was performed using the Boart Longyear TruCore™ orientation system. All assays reported are uncut unless otherwise stated. All samples reported herein were performed by SGS Mineral Services of Red Lake, Ontario. All NQ core assays reported were obtained by fire assay with AA-finish or using gravimetric finish for values over 10.0 g/t Au.

Intercepts cited do not necessarily represent true widths, unless otherwise noted, however drilling is generally intersecting interpreted mineralized zones at a high angle. True width determinations are estimated at 65-80% of the core length intervals for the 305-metre level drilling, and estimated at 75-95% of the core length for the 610- and 685-metre level drilling. Rubicon's quality control checks include insertion of blanks, certified reference standards and blind duplicates to ensure laboratory accuracy and precision.

About Rubicon Minerals Corporation
Rubicon Minerals Corp. is an advanced gold exploration company that owns the Phoenix Gold Project, located in the prolific Red Lake gold district in northwestern Ontario, Canada. Additionally, Rubicon controls over 280 square kilometres of prime exploration ground in Red Lake and more than 900 square kilometres of mineral property interests in the emerging Long Canyon gold district that straddles the Nevada-Utah border in the United States. Rubicon's shares are listed on the Toronto Stock Exchange (RMX) and the OTCQX markets (RBYCF). For more information, please visit our website at www.rubiconminerals.com.

RUBICON MINERALS CORPORATION
George Ogilvie, P.Eng.
President, CEO, and Director

Cautionary Statement regarding Forward-Looking Statements and other Cautionary Notes

This news release contains statements that constitute "forward-looking statements" and "forward looking information" (collectively, "forward-looking statements") within the meaning of applicable Canadian and United States securities legislation. Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as "believes", "intends", "may", "will", "should", "plans", "anticipates", "potential", "expects", "estimates", "forecasts", "budget", "likely", "goal" and similar expressions or statements that certain actions, events or results may or may not be achieved or occur in the future. In some cases, forward-looking information may be stated in the present tense, such as in respect of current matters that may be continuing, or that may have a future impact or effect. Forward-looking statements reflect our current expectations and assumptions, and are subject to a number of known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any anticipated future results, performance or achievements expressed or implied by the forward-looking statements. Forward-looking statements include, but are not limited to statements regarding the purpose of the Preliminary Structural Interpretation, the anticipated future steps relating to the Preliminary Structural Interpretation in conjunction with the Company's 2018 Exploration Program, the preliminary observations of the Preliminary Structural Interpretation in respect of, without limitation, the continuity of the gold mineralization within the HiTi Basalt Units, the local geology in the F2 Gold Deposit, and the nature of the D2 E-W oriented shear zones and brittle faults, the potential impact of the Preliminary Structural Interpretation on the geological model of and the appropriate mining method for the F2 Gold Deposit, the anticipated timing and details of the test mining currently underway, and the anticipated timing of the delivery of an updated geological model and Mineral Resource Estimate.

Forward-looking statements are based on the opinions and estimates of management as of the date such statements are made and represent management's best judgment based on facts and assumptions that management considers reasonable. If such opinions and estimates prove to be incorrect, actual and future results may be materially different than expressed in the forward-looking statements.

Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Rubicon to be materially different from any future

results, performance or achievements expressed or implied by the forward-looking statements. Such factors include, among others: possible variations in mineralization, grade or recovery or throughput rates; uncertainty of mineral resources, inability to realize exploration potential, mineral grades and mineral recovery estimates; actual results of current exploration activities; actual results of reclamation activities; uncertainty of future operations, delays in completion of exploration plans for any reason including insufficient capital, delays in permitting, and labour issues; conclusions of future economic or geological evaluations; changes in project parameters as plans continue to be refined; failure of equipment or processes to operate as anticipated; accidents and other risks of the mining industry; delays and other risks related to operations; timing and receipt of regulatory approvals; the ability of Rubicon and other relevant parties to satisfy regulatory requirements; the ability of Rubicon to comply with its obligations under material agreements including financing agreements; the availability of financing for proposed programs and working capital requirements on reasonable terms; the ability of third-party service providers to deliver services on reasonable terms and in a timely manner; risks associated with the ability to retain key executives and key operating personnel; cost of environmental expenditures and potential environmental liabilities; dissatisfaction or disputes with local communities or First Nations or Aboriginal Communities; failure of plant, equipment or processes to operate as anticipated; market conditions and general business, economic, competitive, political and social conditions; our ability to generate sufficient cash flow from operations or obtain adequate financing to fund our capital expenditures and working capital needs and meet our other obligations; the volatility of our stock price, and the ability of our common stock to remain listed and traded on the TSX.

Forward-looking statements contained herein are made as of the date of this news release and Rubicon disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or results or otherwise, except as required by applicable securities laws. Readers are advised to carefully review and consider the risk factors identified in the Company's annual information form dated March 29, 2017 under the heading "Risk Factors" and in other continuous disclosure documents of the Company filed at www.sedar.com for a discussion of the factors that could cause Rubicon's actual results, performance and achievements to be materially different from any anticipated future results, performance or achievements expressed or implied by the forward-looking statements. Readers are further cautioned that the foregoing list of assumptions and risk factors is not exhaustive and it is recommended that prospective investors consult the more complete discussion of Rubicon's business, financial condition and prospects that is included in this news release. The forward-looking statements contained herein are expressly qualified by this cautionary statement.

The Toronto Stock Exchange has not reviewed and does not accept responsibility for the adequacy or accuracy of this release.

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