

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

**FORM S-8
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

BKV CORPORATION
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

85-0886382
(I.R.S. Employer
Identification No.)

1200 17th Street, Suite 2100
Denver, Colorado 80202
(Address of Principal Executive Offices) (Zip Code)

**BKV CORPORATION 2024 EQUITY AND INCENTIVE COMPENSATION PLAN
BKV CORPORATION EMPLOYEE STOCK PURCHASE PLAN
(Full title of the plan)**

Christopher P. Kalnin
Chief Executive Officer
BKV Corporation
1200 17th Street, Suite 2100
Denver, Colorado 80202
(Name and address of agent for service)

(720) 375-9680
(Telephone number, including area code, of agent for service)

With a copy to:
Samantha H. Crispin
M. Preston Bernhisel
Baker Botts L.L.P.
2001 Ross Avenue, Suite 900
Dallas, Texas 75201
(214) 953-6500

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

EXPLANATORY NOTE

This Registration Statement on Form S-8 (the “Registration Statement”) of BKV Corporation (“BKV” or the “registrant”) relates to (i) 5,000,000 shares of its common stock, par value \$0.01 per share (“Common Stock”), issuable in respect of awards granted under the BKV Corporation 2024 Equity and Incentive Compensation Plan (as amended from time to time, the “2024 Plan”), which include shares of Common Stock that may again become available for delivery with respect to awards under the 2024 Plan pursuant to the share counting, share recycling and other terms and conditions of the 2024 Plan and (ii) 500,000 shares of Common Stock issuable under the BKV Corporation Employee Stock Purchase Plan (as amended from time to time, the “ESPP” and, together with the 2024 Plan, each, a “Plan” and, collectively, the “Plans”). Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the “Securities Act”), this Registration Statement shall also cover such indeterminate number of additional shares of Common Stock as may become issuable under the Plans as a result of stock splits, stock dividends or similar transactions pursuant to the adjustment or antidilution provisions thereof.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The registrant will send or give to all participants in any Plan the document(s) containing information required by Part I of Form S-8, as specified in Rule 428(b) (1) promulgated by the Securities and Exchange Commission (the “Commission”) under the Securities Act. The registrant has not filed such document(s) with the Commission, but such documents (along with the documents incorporated by reference into this Registration Statement pursuant to Item 3 of Part II hereof) shall constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act. The registrant shall maintain a file of such documents in accordance with the provisions of Rule 428(a)(2) under the Securities Act. Upon request, the registrant shall furnish to the Commission or its staff a copy or copies of all of the documents included in such file.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

Except to the extent that information is deemed furnished and not filed pursuant to securities laws and regulations, the following documents filed with the Commission are incorporated by reference into this Registration Statement and will be deemed to be a part hereof:

- (a) the registrant’s prospectus (the “Prospectus”) filed with the Commission pursuant to Rule 424(b) under the Securities Act on [September 27, 2024](#), forming a part of the registrant’s Registration Statement on Form S-1 (File No. 333-268469), originally filed with the Commission on [November 18, 2022](#) (as amended, including all exhibits);
- (b) the registrant’s Current Report on Form 8-K filed with the Commission on [September 27, 2024](#); and
- (c) the description of the Common Stock contained in the registrant’s Registration Statement on Form 8-A filed with the Commission on [September 25, 2024](#), and any amendment or report filed for the purpose of updating that description.

Except to the extent that information is deemed furnished and not filed pursuant to securities laws and regulations, all documents subsequently filed by the registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), prior to the filing of a post-effective amendment that indicates that all securities offered have been sold or that deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be a part hereof from the dates of filing of such documents.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

The Second Amended and Restated Certificate of Incorporation of BKV Corporation (the “Certificate of Incorporation”) provides that directors and officers will not be liable to BKV or its stockholders for monetary damages to the fullest extent permitted by the Delaware General Corporation Law (the “DGCL”). In addition, if the DGCL is amended to authorize the further elimination or limitation of the liability of directors and officers, then the liability of a director or officer of BKV, in addition to the limitation on personal liability provided for in the Certificate of Incorporation, will be limited to the fullest extent permitted by the amended DGCL. The Amended and Restated Bylaws of BKV Corporation (the “Bylaws”) provide that BKV will indemnify, and advance expenses to, any officer or director to the fullest extent authorized by the DGCL.

Section 145 of the DGCL provides that a corporation may indemnify directors and officers as well as other employees and individuals against expenses, including attorneys’ fees, judgments, fines and amounts paid in settlement in connection with specified actions, suits and proceedings whether civil, criminal, administrative, or investigative, other than a derivative action by or in the right of the corporation, if they acted in good faith and in a manner they reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe their conduct was unlawful. A similar standard is applicable in the case of derivative actions, except that indemnification extends only to expenses, including attorneys’ fees, incurred in connection with the defense or settlement of such action and the statute requires court approval before there can be any indemnification where the person seeking indemnification has been found liable to the corporation. The statute provides that it is not exclusive of other indemnification that may be granted by a corporation’s certificate of incorporation, bylaws, disinterested director vote, stockholder vote, agreement or otherwise.

The Certificate of Incorporation also contains indemnification rights for BKV’s directors and officers. Specifically, the Certificate of Incorporation provides that BKV shall defend, indemnify and advance expenses to its officers and directors to the fullest extent authorized by the DGCL. Further, BKV may maintain insurance on behalf of its officers and directors against expense, liability or loss asserted incurred by them in their capacities as officers and directors.

In addition, BKV has entered into indemnification agreements with its current directors and officers containing provisions that are in some respects broader than the specific indemnification provisions contained in the DGCL. The indemnification agreements require BKV, among other things, to indemnify its directors and officers against certain liabilities that may arise by reason of their status or service as directors or officers and to advance their expenses incurred as a result of any proceeding against them as to which they could be indemnified. BKV also intends to enter into indemnification agreements with its future directors and officers.

BKV intends to maintain liability insurance policies that indemnify its directors and officers against various liabilities, including certain liabilities arising under the Securities Act or the Exchange Act that may be incurred by them in their capacity as such.

The underwriting agreement entered into in connection with the initial public offering of BKV’s Common Stock provides for indemnification of BKV’s directors and officers by the underwriters against certain liabilities arising under the Securities Act or otherwise in connection with such offering.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

The following documents are filed as a part of this Registration Statement or incorporated by reference herein:

Exhibit Number	Description
4.1	Second Amended and Restated Certificate of Incorporation of BKV Corporation (incorporated herein by reference to Exhibit 3.1 to the registrant’s Current Report on Form 8-K filed on September 27, 2024).
4.2	Second Amended and Restated Bylaws of BKV Corporation (incorporated herein by reference to Exhibit 3.2 to the registrant’s Current Report on Form 8-K filed on September 27, 2024).

4.3	Form of Common Stock Certificate (incorporated herein by reference to Exhibit 4.1 to the registrant's Registration Statement on Form S-1 (File No. 333-268469) filed on November 18, 2022).
4.4	BKV Corporation 2024 Equity and Incentive Compensation Plan, effective as of September 25, 2024 (incorporated herein by reference to Exhibit 10.3 to the registrant's Current Report on Form 8-K filed on September 27, 2024).
4.5*	BKV Corporation Employee Stock Purchase Plan, effective as of September 25, 2024.
5.1*	Opinion of Baker Botts L.L.P. as to the legality of the securities being registered.
23.1*	Consent of PricewaterhouseCoopers LLP (BKV Corporation).
23.2*	Consent of Ryder Scott Company, L.P.
23.3*	Consent of Baker Botts L.L.P. (included as part of Exhibit 5.1 hereto).
24.1*	Power of Attorney (included on the signature page hereto).
107*	Filing Fee Table.

* Filed herewith.

Item 9. Undertakings.

(a) The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the Registration Statement.
- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Denver, State of Colorado, on September 27, 2024.

BKV CORPORATION

By: /s/ Christopher P. Kalnin
Christopher P. Kalnin
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Christopher P. Kalnin and Lindsay B. Larrick, and each of them, his or her true and lawful attorneys-in-fact and agents, each with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments, including post-effective amendments, to this registration statement, and any registration statement relating to the offering covered by this registration statement and filed pursuant to Rule 462(b) under the Securities Act of 1933, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorney-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed below by the following persons in the capacities and on the date indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Christopher P. Kalnin</u> Christopher P. Kalnin	Chief Executive Officer and Director (Principal Executive Officer)	September 27, 2024
<u>/s/ John T. Jimenez</u> John T. Jimenez	Chief Financial Officer (Principal Financial Officer)	September 27, 2024
<u>/s/ Barry S. Turcotte</u> Barry S. Turcotte	Chief Accounting Officer (Principal Accounting Officer)	September 27, 2024
<u>/s/ Chanin Vongkusolkit</u> Chanin Vongkusolkit	Chairman of the Board	September 27, 2024
<u>/s/ Somruedee Chaimongkol</u> Somruedee Chaimongkol	Director	September 27, 2024
<u>/s/ Joseph R. Davis</u> Joseph R. Davis	Director	September 27, 2024
<u>/s/ Akaraphong Dayananda</u> Akaraphong Dayananda	Director	September 27, 2024
<u>/s/ Kirana Limpaphayom</u> Kirana Limpaphayom	Director	September 27, 2024
<u>/s/ Carla S. Mashinski</u> Carla S. Mashinski	Director	September 27, 2024

<hr/> <i>/s/ Thiti Mekavichai</i> Thiti Mekavichai	Director	September 27, 2024
<hr/> <i>/s/ Charles C. Miller III</i> Charles C. Miller III	Director	September 27, 2024
<hr/> <i>/s/ Sunit S. Patel</i> Sunit S. Patel	Director	September 27, 2024
<hr/> <i>/s/ Anon Sirisaengtaksin</i> Anon Sirisaengtaksin	Director	September 27, 2024
<hr/> <i>/s/ Sinon Vongkusolkrit</i> Sinon Vongkusolkrit	Director	September 27, 2024

BKV CORPORATION

EMPLOYEE STOCK PURCHASE PLAN

1. Purpose. The purpose of the Plan is to provide employees of the Company and its Designated Companies with an opportunity to acquire a proprietary interest in the Company through the purchase of Common Shares. The Company intends for the Plan to qualify as an “employee stock purchase plan” under Section 423 of the Code. Accordingly, the provisions of the Plan shall be interpreted in a manner that is consistent with this intent.

2. Definitions.

(a) “Applicable Laws” means the requirements relating to the administration of equity-based awards under U.S. state corporate laws, U.S. federal and state securities laws, the Code, any stock exchange or quotation system on which the Common Shares are listed or quoted and the applicable laws of any foreign country or jurisdiction where options are, or will be, granted under the Plan.

(b) “Board” means the Board of Directors of the Company.

(c) “Change in Control” means a “Change in Control” as defined in the BKV Corporation 2022 Equity and Compensation Incentive Plan, or any successor plan thereto, in each case, as amended from time to time.

(d) “Code” means the Internal Revenue Code of 1986, as amended from time to time, and the regulations thereunder, as such law and regulations may be amended from time to time.

(e) “Committee” means the Compensation Committee of the Board (or its successor(s)), or any other committee of the Board designated by the Board to administer this Plan.

(f) “Common Shares” means the shares of common stock, par value \$0.01 per share, of the Company or any security into which such common shares may be changed by reason of any transaction or event of the type referred to in Section 17 of this Plan.

(g) “Company” means BKV Corporation, a Delaware corporation, and its successors.

(h) “Compensation” means an Eligible Employee’s after-tax base pay or wages. The Committee, in its discretion, may, on a uniform and nondiscriminatory basis, establish a different definition of Compensation for a subsequent Offering Period.

(i) “Contributions” means the payroll deductions and other additional payments that the Company may permit to be made by a Participant to fund the exercise of options granted pursuant to the Plan.

(j) “Designated Company” means a corporation, company or other entity (i) more than 80% of whose outstanding shares or securities (representing the right to vote for the election of directors or other managing authority) are, or (ii) which does not have outstanding shares or securities (as may be the case in a partnership, joint venture, limited liability company, unincorporated association or other similar entity), but more than 80% of whose ownership interest representing the right generally to make decisions for such other entity is, now or hereafter, owned or controlled, directly or indirectly, by the Company that has been designated by the Committee from time to time in its sole discretion as eligible to participate in the Plan.

(k) “Director” means a member of the Board.

(l) “Eligible Employee” means an Employee who (i) has completed at least six (6) months of service since his or her last hire date prior to the beginning of the Offering and (ii) is customarily employed for at least twenty (20) hours per week and more than five (5) months per calendar year. The Committee, in its discretion, may determine that the definition of Eligible Employee will also exclude an Employee if he or she: (i) has not completed at least two (2) years of service since his or her last hire date (or such lesser period of time as may be determined by the Committee) or (ii) is a highly compensated employee within the meaning of Section 414(q) of the Code, provided such additional exclusion is made prior to an Offering and is applied with respect to such Offering in an identical and nondiscriminatory manner to all Eligible Employees participating in that Offering.

(m) “Employee” means any person who renders services to the Company or a Designated Company as an employee pursuant to an employment relationship with such Company or Designated Company.

(n) “Employer” means the employer of the applicable Eligible Employee(s), which Employer may be the Company or a Designated Company.

(o) “Enrollment Form” means an agreement pursuant to which an Eligible Employee may elect to enroll in the Plan, to authorize a new level of Contributions, or to stop Contributions and withdraw from an Offering Period.

(p) “Enrollment Period” means the period during which Eligible Employees may elect to participate in the Plan, commencing approximately 60 days prior to the beginning of each Offering and ending approximately 30 days prior to such Offering (or such other period as may be established by the Committee).

(q) “Exchange Act” means the Securities Exchange Act of 1934, as amended from time to time, and the rules and regulations thereunder, as such law, rules and regulations may be amended from time to time.

(r) “Fair Market Value” means, as of any particular date, the closing price of a Common Share as reported for that date on the New York Stock Exchange or, if the Common Shares are not then listed on the New York Stock Exchange, on any other national securities exchange on which the Common Shares are listed, or if there are no sales on such date, on the next preceding Trading Day during which a sale occurred. If there is no regular public trading market for the Common Shares, then the Fair Market Value shall be the fair market value as determined in good faith by the Committee.

(s) “Offering” means the grant to Eligible Employees of an option to purchase Common Shares, with the exercise of those options automatically occurring on the applicable Purchase Date. Each Offering shall be comprised of one Offering Period.

(t) “Offering Period” means the period during an Offering when Participants make Contributions for the purchase of Common Shares on a Purchase Date; provided, however, that no Offering Period may last more than twenty-seven months.

(u) “Parent” means a “parent corporation,” whether now or hereafter existing, as defined in Section 424(e) of the Code.

(v) “Participant” means an Eligible Employee who is actively participating in the Plan for a particular Offering Period.

(w) “Plan” means this BKV Corporation Employee Stock Purchase Plan.

(x) “Purchase Date” means, unless otherwise determined by the Committee, the last Trading Day of each Offering Period.

(y) “Purchase Price” means an amount equal to the lesser of eighty-five percent (85%) (or such greater percentage as designated by the Committee) of the Fair Market Value of a Common Share on the first Trading Day of the Offering Period or eighty-five percent (85%) (or such greater percentage as designated by the Committee) on the Purchase Date.

(z) “Subsidiary” means a corporation, company or other entity (i) more than 50% of whose outstanding shares or securities (representing the right to vote for the election of directors or other managing authority) are, or (ii) which does not have outstanding shares or securities (as may be the case in a partnership, joint venture, limited liability company, unincorporated association or other similar entity), but more than 50% of whose ownership interest representing the right generally to make decisions for such other entity is, now or hereafter, owned or controlled, directly or indirectly, by the Company. In all cases, the determination of whether an entity is a Subsidiary shall be made in accordance with Section 424(f) of the Code.

(aa) “Trading Day” means a day on which the national stock exchange upon which the Common Shares are listed is open for trading or, if the Common Shares are not listed on an established stock exchange or national market system, a business day, as determined in good faith by the Committee.

(bb) “U.S. Treasury Regulations” means the Treasury regulations of the Code. Reference to a specific Treasury Regulation will include such Treasury Regulation, the section of the Code under which such regulation was promulgated, and any comparable provision of any future legislation or regulation amending, supplementing, or superseding such section or regulation.

3. Administration. The Plan shall be administered by the Committee, which shall have the authority to, subject to, and within the limitations of, the express provisions of the Plan, (a) determine how and when to grant options to purchase Common Shares and the provisions of each Offering (which need not be identical), (b) designate from time to time which Subsidiaries will be eligible to participate in the Plan as Designated Companies and which Designated Companies will participate in each separate Offering (to the extent that the Company makes separate Offerings), (c) construe, interpret and apply the Plan and the options granted hereunder, including determining eligibility and adjudicating all disputed claims filed under the Plan; (d) prescribe, amend and rescind rules relating the Plan's administration; and (e) take any other actions necessary or desirable for the administration of the Plan. For the avoidance of doubt, the Board shall have the same powers and authorities as the Committee with respect to the administration of the Plan and may, in its discretion, act in lieu of the Committee with respect to the Plan. Every finding, decision, and determination made by the Committee or Board will, to the full extent permitted by law, be final and conclusive and will be binding upon all parties. Neither the Committee nor the Board, nor any member thereof, will be liable for any such action or determination made in good faith.

4. Eligibility.

(a) Unless otherwise determined by the Committee in a manner that is consistent with Section 423 of the Code, any individual who is an Eligible Employee as of the first day of an Enrollment Period for a particular Offering shall be eligible to participate in such Offering, subject to the requirements of Section 423 of the Code.

(b) Notwithstanding any provision of the Plan to the contrary, no Eligible Employee shall be granted an option under the Plan if (i) immediately after the grant of the option, such Eligible Employee (or any other person whose stock would be attributed to such Eligible Employee pursuant to Section 424(d) of the Code) would own capital stock of the Company or hold outstanding options to purchase stock possessing five percent (5%) or more of the total combined voting power or value of all classes of stock of the Company or any Subsidiary or (ii) such option would permit his or her rights to purchase stock under all employee stock purchase plans (described in Section 423 of the Code) of the Company and its Subsidiaries to accrue at a rate that exceeds \$25,000 of the Fair Market Value of such stock (determined at the time the option is granted) for each calendar year in which such option is outstanding at any time.

(c) Non-US Employees. Eligible Employees who are citizens or residents of a non-U.S. jurisdiction (without regard to whether they are also citizens or residents of the United States or resident aliens (within the meaning of Section 7701(b)(1)(A) of the Code)) may be excluded from participation in the Plan or an Offering if the participation of such Eligible Employees is prohibited under the laws of the applicable jurisdiction or if complying with the laws of the applicable jurisdiction would cause the Plan or an Offering to violate Section 423 of the Code.

5. Offerings. The Plan shall be implemented by a series of consecutive Offerings that, unless otherwise provided by the Committee, shall be for a duration of approximately six (6) months, beginning on each of January 1st and July 1st of each year. Each Offering shall consist of one Offering Period, and unless otherwise provided by the Committee, the Offering beginning on January 1st of each year shall have one Offering Period beginning on January 1st and ending on June 30th of such year, and the Offering beginning on July 1st of each year shall have one Offering Period beginning on July 1st and ending on December 31st of such year.

(a) Enrollment; Contributions. An Eligible Employee may elect to participate in the Plan by, during an Enrollment Period, properly completing an Enrollment Form, which may be electronic, and submitting it to the Company, in accordance with the enrollment procedures established by the Committee. Participation in the Plan is voluntary. The Enrollment Form shall indicate the percentage of the Eligible Employee's Compensation (from 1% through 10% (or such lesser or greater percentage determined by the Committee in connection with a particular Offering), in multiples of 1%) that the Eligible Employee elects to be withheld from his or her paychecks received during the applicable Offering Period. Contributions shall commence on the first payroll date following the first Trading Day of the applicable Offering Period and end on the last payroll date before the Purchase Date. The Company shall maintain records of all Contributions but shall have no obligation to pay interest on Contributions or to hold such amounts in a trust or in any segregated account.

(b) Election Changes. After the commencement of an Offering, unless the Committee determined otherwise in connection with a particular Offering, a Participant shall not be permitted to change the percentage of Compensation elected to be withheld during that Offering. However, a Participant may elect to discontinue his or her Contributions in accordance with Section 9.

(c) Automatic Re-enrollment. Once an Eligible Employee becomes a Participant in an Offering, such Participant will automatically participate in each subsequent Offering commencing immediately following the last day of the prior Offering unless the Participant withdraws or is deemed to withdraw from this Plan as set forth in Section 9 or Section 10. A Participant may decrease or increase his or her rate of Contributions for future Offerings unless the Participant (a) submits a new Enrollment Form authorizing a new level of Contributions in accordance with Section 5(a), (b) withdraws from the Plan in accordance with Section 9, or (c) terminates employment or otherwise becomes ineligible to participate in the Plan.

6. Grant of Option. In connection with each Offering, each Participant in the applicable Offering shall be granted an option to purchase, on the Purchase Date, a number of Common Shares determined by dividing the Participant's accumulated Contributions for that Offering Period by the Purchase Price.

7. Exercise of Option/Purchase of Shares. A Participant's option to purchase Common Shares will be exercised automatically on the Purchase Date of each Offering Period. The Participant's accumulated Contributions for a particular Offering Period will be used to purchase the maximum number of whole Common Shares that can be purchased with the amounts in the Participant's notional account. Unless otherwise determined by the Committee, following the purchase of Common Shares on each Purchase Date, any remaining Contributions for each Participant shall be refunded to the Participant, without interest (unless required by Applicable Law), as soon as administratively practicable.

8. Transfer of Shares. As soon as reasonably practicable after each Purchase Date, the Company will arrange for the delivery to each Participant of the Common Shares purchased upon exercise of his or her option. The Committee may permit or require that the Common Shares be deposited in an account in the name of the Participant with a brokerage firm selected by the Committee and the Committee may require that the Common Shares be retained in such account for a specified period of time and/or may establish other procedures to permit tracking of disqualifying dispositions of such Common Shares. Until the Common Shares are delivered pursuant to this Section 8, Participants will have only the rights of an unsecured creditor with respect to such Common Shares subject to any option granted hereunder and will not have any voting, dividend or other rights of a shareholder.

9. Withdrawal.

(a) Withdrawal Procedure. A Participant may withdraw all, but not less than all, of the Contributions credited to his or her notional account for a particular Offering that have not yet been used to purchase Common Shares during the Offering Period in with the Participant withdraws by submitting to the Company a revised Enrollment Form indicating his or her election to withdraw at least thirty (30) days before the Purchase Date. The accumulated Contributions held on behalf of a Participant in his or her notional account (that have not been used to purchase Common Shares) shall be paid to the Participant as soon as administratively feasible after receipt of the Participant's Enrollment Form indicating his or her election to withdraw and the Participant's option shall be automatically terminated, and no further Contributions for the purchase of Common Shares will be made for such Offering.

(b) Effect on Succeeding Offerings. A Participant's election to withdraw from an Offering will not have any effect upon his or her eligibility to participate in succeeding Offerings that commence following the completion of the Offering from which the Participant withdraws; however, if a Participant withdraws from an Offering, no Contributions will be made during any succeeding Offering, unless the Participant re-enrolls in accordance with Section 5(a) of the Plan.

10. Termination of Employment; Change in Employment Status. Upon termination of a Participant's employment for any reason, including death or disability, or a change in the Participant's employment status following which the Participant is no longer an Eligible Employee, the Participant will be deemed to have withdrawn from the Plan and the Contributions in the Participant's notional account (that have not been used to purchase Common Shares) shall be returned to the Participant, or in the case of the Participant's death, to the person(s) entitled to such amounts under Section 16, and the Participant's option shall be automatically terminated. Unless otherwise provided by the Committee, a Participant whose employment transfers between entities through a termination with an immediate rehire (with no break in service) by the Company or a Designated Company will not be treated as terminated under the Plan.

11. Interest. No interest shall accrue on or be payable with respect to the Contributions of a Participant in the Plan, except as may be required by Applicable Law, and if so required by the laws of a particular jurisdiction, will apply to all Participants in the relevant Offering except to the extent otherwise permitted by U.S. Treasury Regulation Section 1.423-2(f).

12. Shares Reserved for Plan.

(a) Number of Shares. Subject to adjustments as set forth in Section 17, a total of 1,000,000 Common Shares have been reserved as authorized for the grant of options under the Plan. The Common Shares may be newly issued shares, treasury shares or shares acquired on the open market.

(b) Over-subscribed Offerings. The number of Common Shares which a Participant may purchase in an Offering under the Plan may be reduced if the Offering is over-subscribed. No option granted under the Plan shall permit a Participant to purchase Common Shares which, if added together with the total number of Common Shares purchased by all other Participants in such Offering would exceed the total number of Common Shares remaining available under the Plan. If the Committee determines that, on a particular Purchase Date, the number of Common Shares with respect to which options are to be exercised exceeds the number of Common Shares then available under the Plan, the Company shall make a pro rata allocation of the Common Shares remaining available for purchase in as uniform a manner as practicable and as the Committee determines to be equitable.

13. Transferability. No Contributions credited to a Participant, nor any rights with respect to the exercise of an option or any rights to receive Common Shares hereunder, may be assigned, transferred, pledged or otherwise disposed of in any way (other than by will, the laws of descent and distribution, or as provided in Section 16 hereof) by the Participant. Any attempt to assign, transfer, pledge or otherwise dispose of such rights or amounts shall be without effect.

14. Application of Funds. All Contributions received or held by the Company under the Plan may be used by the Company for any corporate purpose to the extent permitted by Applicable Law, and the Company shall not be required to segregate such Contributions.

15. Statements. Participants will be provided with statements at least annually which shall set forth the Contributions made by the Participant to the Plan, the Purchase Price of any Common Shares purchased with accumulated funds, the number of Common Shares purchased, and any Contributions remaining in the Participant's notional account.

16. Designation of Beneficiary. A Participant may file, on forms supplied by the Committee, a written designation of beneficiary who is to receive any Common Shares and cash in respect of any fractional Common Shares, if any, from the Participant's account as may be required under Section 10 in the event of such Participant's death. In addition, a Participant may file a written designation of beneficiary who is to receive any cash withheld through Contributions and credited to the Participant's notional account in the event of the Participant's death prior to the Purchase Date of an Offering Period. If a Participant is married and the designated beneficiary is not the spouse, spousal consent will be required for such designation to be effective. Such designation of beneficiary may be changed by the Participant at any time by notice on forms supplied by the Committee. In the event of the death of a Participant in the absence of a beneficiary validly designated under the Plan who is living at the time of such Participant's death, Common Shares or cash deliverable pursuant to this Section 16 shall be delivered to the executor or administrator of the Participant's estate. Notwithstanding the foregoing, the Committee may decide not to permit such designations by Participants in non-U.S. jurisdictions to the extent permitted by U.S. Treasury Regulation Section 1.423-2(f).

17. Adjustments Upon Changes in Capitalization; Dissolution or Liquidation; Corporate Transactions.

(a) Adjustments. In the event of (a) any extraordinary cash dividend, stock dividend, stock split, combination of shares, recapitalization or other change in the capital structure of the Company, (b) any merger, consolidation, spin-off, split-off, spin-out, split-up, reorganization, partial or complete liquidation or other distribution of assets, issuance of rights or warrants to purchase securities, or (c) any other corporate transaction or event having an effect similar to any of the foregoing, then in order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan, the Committee will, in such manner as it deems equitable, adjust the number of Common Shares that may be delivered under the Plan, the Purchase Price per share and the number of Common Shares covered by each outstanding option under the Plan, and the numerical limits of Section 6 and Section 12.

(b) Dissolution or Liquidation. Unless otherwise determined by the Committee, in the event of a proposed dissolution or liquidation of the Company, any Offering then in progress will be shortened by setting a new Purchase Date and the Offering will end immediately prior to the proposed dissolution or liquidation. The new Purchase Date will be before the date of the Company's proposed dissolution or liquidation. Before the new Purchase Date, the Committee will provide each Participant with written notice, which may be electronic, of the new Purchase Date and that the Participant's option will be exercised automatically on such date, unless before such time, the Participant has withdrawn from the Offering in accordance with Section 9.

(c) Change in Control. Unless otherwise determined by the Committee, in the event of a Change in Control, each outstanding option will be assumed or an equivalent option substituted by the successor corporation or a Parent or Subsidiary of such successor corporation. If the successor corporation refuses to assume or substitute the option, unless otherwise provided by the Committee, the Offering with respect to which the option relates will be shortened by setting a new Purchase Date on which the Offering will end. The new Purchase Date will occur before the date of the Change in Control. Prior to the new Purchase Date, the Committee will provide each Participant with written notice, which may be electronic, of the new Purchase Date and that the Participant's option will be exercised automatically on such date, unless before such time, the Participant has withdrawn from the Offering in accordance with Section 9.

18. General Provisions.

(a) Equal Rights and Privileges. Notwithstanding any provision of the Plan to the contrary and in accordance with Section 423 of the Code, all Eligible Employees who are granted options under the Plan shall have the same rights and privileges.

(b) No Right to Continued Service. This Plan will not confer upon any Eligible Employee any right with respect to continuance of employment or other service with the Company or any Subsidiary, nor will it interfere in any way with any right the Company or any Subsidiary would otherwise have to terminate such Participant's employment or other service at any time.

(c) Rights as Shareholder. A Participant will become a shareholder with respect to the Common Shares that are purchased pursuant to options granted under the Plan when the Common Shares are transferred to the Participant or the Participant's account pursuant to Section 8. A Participant will have no rights as a shareholder with respect to Common Shares for which an election to participate in an Offering Period has been made until such Participant becomes a shareholder as provided above.

(d) Successors and Assigns. The Plan shall be binding on the Company and its successors and assigns.

(e) Entire Plan. This Plan constitutes the entire plan with respect to the subject matter hereof and supersedes all prior plans with respect to the subject matter hereof.

(f) Compliance with Law. The obligations of the Company with respect to payments under the Plan are subject to compliance with all Applicable Laws. Common Shares shall not be issued with respect to an option granted under the Plan unless the exercise of such option and the issuance and delivery of the Common Shares pursuant thereto shall comply with all Applicable Laws.

(g) Notice of Disqualifying Dispositions. Each Participant shall give the Company prompt written notice of any disposition or other transfer of Common Shares acquired pursuant to the exercise of an option acquired under the Plan, if such disposition or transfer is made within two years after the first day of the Offering Period or within one year after the Purchase Date.

(h) Term of Plan. Subject to shareholder approval of the Plan pursuant to Section 18(k), the Plan shall become effective immediately prior to the time at which the registration statement covering the initial public offering of the Common Shares is declared effective by the Securities and Exchange Commission (the date on which the Plan becomes effective the "Effective Date") and, unless terminated earlier pursuant to Section 18(i), shall have a term of ten (10) years from the Effective Date.

(i) Amendment or Termination. The Board may, in its sole discretion, amend, suspend or terminate the Plan at any time and for any reason. If the Plan is terminated, the Board may elect to terminate the outstanding Offering Period either immediately or once Common Shares have been purchased on the next Purchase Date (which may, in the discretion of the Board, be accelerated) or permit the Offering Period to expire in accordance with its terms (and subject to any adjustment in accordance with Section 17). If any Offering Period is terminated before its scheduled expiration, all amounts that have not been used to purchase Common Shares will be returned to Participants (without interest, except as otherwise required by Applicable Law) as soon as administratively practicable.

(j) Applicable Law. The laws of the State of Delaware shall govern all questions concerning the construction, validity and interpretation of the Plan, without regard to such state's conflict of law rules.

(k) Shareholder Approval. The Plan shall be subject to approval by the shareholders of the Company within twelve (12) months before or after the date the Plan is adopted by the Board.

(l) Withholding. The Participant must make arrangements satisfactory to the Company or the Employer for the Company's or Employer's federal, state, local or any other tax liability payable to any authority, including taxes imposed by jurisdictions outside of the U.S., national insurance, social security or other tax withholding obligations, if any, which arise on the exercise of the option or the disposition of the Common Shares.

(m) Severability. If any provision of the Plan shall for any reason be held to be invalid or unenforceable, such invalidity or unenforceability shall not affect any other provision hereof, and the Plan shall be construed as if such invalid or unenforceable provision were omitted.

(n) Headings. The headings of sections herein are included solely for convenience and shall not affect the meaning of any of the provisions of the Plan.

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SINGAPORE
WASHINGTON

September 27, 2024

BKV Corporation
1200 17th Street, Suite 2100
Denver, Colorado 80202

Ladies and Gentlemen:

As set forth in the Registration Statement on Form S-8 (the “**Registration Statement**”) to be filed by BKV Corporation, a Delaware corporation (the “**Company**”), with the Securities and Exchange Commission (the “**Commission**”) under the Securities Act of 1933, as amended (the “**Securities Act**”), relating to (i) 5,000,000 shares (the “**2024 Plan Shares**”) of common stock, par value \$0.01 per share, of the Company (“**Common Stock**”), issuable in respect of awards granted under the BKV Corporation 2024 Equity and Incentive Compensation Plan (as amended from time to time, the “**2024 Plan**”), which include shares of Common Stock that may again become available for delivery with respect to awards under the 2024 Plan pursuant to the share counting, share recycling and other terms and conditions of the 2024 Plan and (ii) 500,000 shares (together with the 2024 Plan Shares, the “**Shares**”) of Common Stock issuable under the BKV Corporation Employee Stock Purchase Plan (as amended from time to time, the “**ESPP**” and, together with the 2024 Plan, each, a “**Plan**” and, collectively, the “**Plans**”), certain legal matters in connection with the Shares are being passed upon for you by us. At your request, this opinion letter is being furnished to you for filing as Exhibit 5.1 to the Registration Statement.

In our capacity as your counsel in the connection referred to above and as a basis for the opinions hereinafter expressed, we have examined (i) the Second Amended and Restated Certificate of Incorporation of the Company filed as an exhibit to the Company’s Current Report on Form 8-K filed with the Commission on September 27, 2024 (the “**Form 8-K**”), (ii) the Second Amended and Restated Bylaws of the Company filed as an exhibit to the Form 8-K, (iii) records of proceedings of the Company’s Board of Directors, including committees thereof, with respect to the filing of the Registration Statement and the issuance of the Shares, (iv) the Plans, (v) originals, or copies certified or otherwise identified, of certificates of public officials and of representatives of the Company, (vi) the Registration Statement and (vii) statutes and other instruments and documents as we have deemed necessary or advisable for the purpose of rendering the opinion hereinafter expressed.

In connection with the opinions hereinafter expressed, we have assumed that (i) the Shares will be issued in the manner stated in the Registration Statement; (ii) the consideration received by the Company for the Shares will not be less than the par value of the Shares; and (iii) at or prior to the time of the delivery of any Shares, the Registration Statement will be effective under the Securities Act.

In addition, in giving the opinions hereinafter expressed, we have relied, to the extent we deemed proper, without independent investigation, upon certificates, statements and other representations of officers and other representatives of the Company and of governmental and public officials with respect to the accuracy and completeness of the material factual matters contained therein or covered thereby, and we have assumed, without independent investigation, that the signatures on all documents examined by us are genuine, that all documents submitted to us as originals are accurate and complete, that all documents submitted to us as copies are true and correct copies of the originals thereof, that such original copies are authentic and complete and that all information submitted to us was accurate and complete.

On the basis of the foregoing, and subject to the assumptions, limitations and qualifications hereinafter set forth, we are of the opinion that following due authorization of a particular award as provided in and in accordance with the Plans, the Shares issuable pursuant to such award will have been duly authorized by all necessary corporate action on the part of the Company. Upon issuance and delivery of such Shares from time to time pursuant to the terms of such award for the consideration established pursuant to the terms of the Plans and otherwise in accordance with the terms and conditions of such award, including, if applicable, the lapse of any restrictions relating thereto, the satisfaction of any performance conditions associated therewith and any requisite determinations by or pursuant to the authority of the Board of Directors of the Company or a duly constituted and acting committee thereof as provided therein, and, in the case of stock options, the exercise thereof and payment for such Shares as provided therein, such Shares will be validly issued, fully paid and nonassessable.

The opinions set forth above is limited in all respects to matters of the General Corporation Law of the State of Delaware, and applicable reported judicial decisions, rules and regulations interpreting and implementing those laws, in each case, as in effect on the date hereof. We express no opinion as to the effect of the laws of any other jurisdiction.

We hereby consent to the filing of this opinion letter with the Commission as Exhibit 5.1 to the Registration Statement. In giving this consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ Baker Botts L.L.P.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of BKV Corporation of our report dated April 29, 2024 relating to the financial statements of BKV Corporation, which appears in BKV Corporation's Registration Statement on Form S-1 (File No. 333-268469).

/s/ PricewaterhouseCoopers LLP

Dallas, Texas
September 27, 2024



TBPELS REGISTERED ENGINEERING FIRM F-1580
633 17TH STREET SUITE 1700

DENVER, COLORADO 80202

TELEPHONE (303) 339-8110

CONSENT OF INDEPENDENT PETROLEUM ENGINEERS

We hereby consent to the references to our firm in this Registration Statement on Form S-8 of BKV Corporation, and to the use of information from, and the inclusion or incorporation by reference of, our reports, (i) dated August 7, 2024, with respect to the estimates of proved reserves, future production and income attributable to certain leasehold and royalty interests of BKV Corporation referred to as the Barnett Assets as of December 31, 2021, (ii) dated August 7, 2024, with respect to the estimates of proved reserves, future production and income attributable to certain leasehold interests of BKV Corporation referred to as the Chaffee Corners Assets as of December 31, 2021, (iii) dated August 7, 2024, with respect to the estimates of proved reserves, future production and income attributable to certain leasehold interests of BKV Corporation referred to as the Chelsea Assets as of December 31, 2021, (iv) dated August 7, 2024, with respect to the estimates of proved reserves, future production and income attributable to certain leasehold interests of BKV Corporation referred to as the BKV Assets as of December 31, 2021, (v) dated August 7, 2024, with respect to the estimates of proved reserves, future production and income attributable to certain leasehold and royalty interests of BKV Corporation referred to as the Barnett Assets as of December 31, 2022, (vi) dated August 7, 2024, with respect to the estimates of proved reserves, future production and income attributable to certain leasehold interests of BKV Corporation referred to as the Chaffee Corners Assets as of December 31, 2022, (vii) dated August 7, 2024, with respect to the estimates of proved reserves, future production and income attributable to certain leasehold and royalty interests of BKV Corporation referred to as the Chelsea Assets as of December 31, 2022, (viii) dated August 7, 2024, with respect to the estimates of proved reserves, future production and income attributable to certain leasehold and royalty interests of BKV Corporation referred to as the BKV Assets as of December 31, 2022, (ix) dated August 7, 2024, with respect to the estimates of proved reserves, future production and income attributable to certain leasehold and royalty interests of BKV Corporation referred to as the North Texas Assets as of December 31, 2022, (x) dated August 7, 2024, with respect to the estimates of proved reserves, future production and income attributable to certain leasehold and royalty interests of BKV Corporation referred to as the Total Company Assets as of December 31, 2023, and (xi) dated August 7, 2024, with respect to the estimates of proved reserves, future production and income attributable to certain leasehold and royalty interests of BKV Corporation referred to as the Total Company Assets, using a NYMEX Alternate Pricing Scheme, as of December 31, 2023, each included in BKV Corporation's Registration Statement on Form S-1 (File No. 333-268469) and incorporated by reference in this Registration Statement on Form S-8 of BKV Corporation.

/s/ Ryder Scott Company, L.P.

RYDER SCOTT COMPANY, L.P.

TBPELS Firm Registration No. F-1580

Denver, Colorado
September 27, 2024

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Calculation of Filing Fee Tables

Form S-8
(Form Type)

BKV Corporation
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule (1)	Amount Registered (2)	Proposed Maximum Offering Price Per Unit (1)	Maximum Aggregate Offering Price (1)	Fee Rate (3)	Amount of Registration Fee
Equity	Common stock, par value \$0.01 per share	Other	5,500,000 shares	\$ 18.44	\$ 101,420,000	\$ 0.00014760	\$ 14,969.59
Total Offering Amounts					\$ 101,420,000		\$ 14,969.59
Total Fee Offsets							—
Net Fee Due							\$ 14,969.59

- (1) Estimated in accordance with Rules 457(c) and 457(h) under the Securities Act of 1933, as amended (the “Securities Act”), solely for the purpose of calculating the registration fee, on the basis of the average of the high and low prices of shares of common stock, par value \$0.01 per share (“Common Stock”), of BKV Corporation as reported on the New York Stock Exchange on September 26, 2024.
- (2) Consists of (i) 5,000,000 shares of Common Stock issuable in respect of awards granted under the BKV Corporation 2024 Equity and Incentive Compensation Plan (as amended from time to time, the “2024 Plan”), which include shares of Common Stock that may again become available for delivery with respect to awards under the 2024 Plan pursuant to the share counting, share recycling and other terms and conditions of the 2024 Plan, (ii) 500,000 shares of Common Stock issuable under the BKV Corporation Employee Stock Purchase Plan (as amended from time to time, and together with the 2024 Plan, the “Plans”). Pursuant to Rule 416(a) under the Securities Act, this Registration Statement shall also cover such indeterminate number of additional shares of Common Stock as may become issuable under the Plans as a result of stock splits, stock dividends or similar transactions pursuant to the adjustment or antidilution provisions thereof.
- (3) The registration fee for the securities registered hereby has been calculated pursuant to Section 6(b) of the Securities Act at a rate equal to \$147.60 per \$1,000,000 of the proposed maximum aggregate offering price.