## ĭ H.C.WAINWRIGHT&CO.

Target Price Revision Metals and Mining November 5, 2024

Gold Royalty Corp. (GROY) Rating: Buy Heiko F. Ihle, CFA 212-356-0510 hihle@hcwresearch.com

### 3Q24 Financial Results; Ongoing Revenue Growth Fueled by Gold Price Strength and New Royalties; Reiterate Buy; PT Lower

| Stock Data   | 11/4/2024        |        |       |       |  |  |  |  |  |  |
|--|------------------|--------|-------|-------|--|--|--|--|--|--|
| Price  |                  | \$1.41 |       |       |  |  |  |  |  |  |
| Price Target   | \$5.50           |        |       |       |  |  |  |  |  |  |
| 52-Week High   |                  | \$2.21 |       |       |  |  |  |  |  |  |
| 52-Week Low  | \$1.17           |        |       |       |  |  |  |  |  |  |
| Enterprise Valu                                      | \$285.2          |        |       |       |  |  |  |  |  |  |
| Market Cap (M  | \$239            |        |       |       |  |  |  |  |  |  |
| Shares Outstar                                       | 169.5            |        |       |       |  |  |  |  |  |  |
| 3 Month Avg V  | 998,041          |        |       |       |  |  |  |  |  |  |
| Short Interest (                                     | 6.45             |        |       |       |  |  |  |  |  |  |
| Balance Sheet Metrics                                |                  |        |       |       |  |  |  |  |  |  |
| Cash (M)   | \$2.7            |        |       |       |  |  |  |  |  |  |
| Total Debt (M)                                       | \$48.9           |        |       |       |  |  |  |  |  |  |
| Total Cash/Sha                                       | \$0.02           |        |       |       |  |  |  |  |  |  |
| Cash (M): Includes short-term investments.           |                  |        |       |       |  |  |  |  |  |  |
| EPS (\$) Diluted                                     |                  |        |       |       |  |  |  |  |  |  |
| Full Year - Sep                                      | 2023A            | 2      | 024E  | 2025E |  |  |  |  |  |  |
| FY   | (0.18) 0.00 0.05 |        |       |       |  |  |  |  |  |  |
| Revenue (M)  |                  |        |       |       |  |  |  |  |  |  |
| Full Year - Sep                                      | 2023A            | 024E   | 2025E |       |  |  |  |  |  |  |
| FY \$3.0 \$10.1 \$16                                 |                  |        |       |       |  |  |  |  |  |  |
| EPS accounts for adjustment of year-end filing date. |                  |        |       |       |  |  |  |  |  |  |

Revenue accounts for adjustment of year-end filing date.

Mainer



3Q24 financial results. On November 4, Gold Royalty Corp. (GROY) announced its 3Q24 financial results. During the guarter, the firm recorded \$2.1M in revenue that yielded net income of \$3.4M, or \$0.02 per share. These figures compare to \$0.8M in revenue and a net loss of \$1.8M, or (\$0.01) per share, during 3Q23. In short, the firm's revenue growth is primarily attributable to new royalty income from Côté and Borborema, alongside existing royalties from the Canadian Malartic, Cozamin, and Borden Mines. We also highlight that GROY's net income exceeded its revenue based on a recorded deferred tax recovery of \$5.9M (\$0.5M in 3Q23). In contrast, the firm incurred significantly higher finance costs of \$2.2M (\$0.4M in 3Q23) that were based on interest expenses from its bank loans and convertible debentures. Looking ahead, we expect continued revenue growth in 4Q24 that should be mainly driven by strong gold pricing and further exacerbated as the Vares and Côté Gold Mines are anticipated to reach full capacity by year-end.

**Favorable GEO outlook.** The company reported strong growth of attributable gold equivalent ounces (GEOs), which reached 1,051 GEOs (+48% YoY). GROY also benefited from strong gold pricing, with revenue per ounce (oz) rising 28% YoY to \$2,475/oz from \$1,927/oz. In our view, the firm remains on track to meet its updated guidance of 6,500 to 7,000 GEOs, which equates to about \$13.0 - \$14.0M in total revenue, land agreement proceeds, and interest. We stress that GROY's royalty generator model has added seven new royalties year to date, for an updated total of 47 since the Ely Gold Royalties acquisition in 2021. Of this total, 32 are for properties under land agreements while six are currently generating proceeds. Finally, we note that the company is incurring minimal maintenance costs of only \$0.1M.

We reiterate our Buy rating on GROY as we slightly decrease our PT to \$5.50 from \$5.75. Our decreased PT is primarily driven by the company's increased debt total amid its slight dilution in our model. We continue to maintain our 7.0% discount rate on São Jorge, Borborema, and Jerritt Canyon. In addition, we value GROY's stream on the Canadian Malartic asset at a reasonably low 6.5% discount rate given its favorable location. We stress that this rate may even prove to be somewhat conservative when looking at the extensive potential of the site. We value the Côté Gold Mine at a 6.5% discount rate. We assign an in-situ valuation to the company's other royalty assets of \$208.3M based on their respective attributable gold ounces. Notably, we maintain our value of the Vares stream at \$70.0M, well above its purchase price of \$50.0M. We also maintain our valuation of \$232.3M for various assets received in the Elv transaction that do not have modeled DCF values. We add \$2.7M in cash and short-term investments before subtracting \$48.9M in debt. Lastly, we apply our P/NAV multiple of 1.1x, which provides our \$1.09B valuation for the company that yields our updated and rounded PT of \$5.50.

**Near-term catalysts.** We stress that GROY acquired a copper stream on the Vares Silver Project in Bosnia and Herzegovina for a total value of \$50.0M in 2Q24. In addition, we reiterate that the Vares Project is still expected to reach full capacity in 4Q24. This should further enhance GROY's revenue and overall financial performance. We anticipate management to prioritize paying down its existing secured revolving credit facility with the support of its convertible debenture. Lastly, we anticipate further M&A activity for new royalty opportunities as the firm seeks to capitalize on additional prospects.

Risks. 1) Commodity prices; 2) lack of operational control; 3) financing risk.

| Gold Royalty Corp. (GROY)<br>All figures expressed in USD unless otherwise n                        | oted                    |          |                    |           |          |                                  |                |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
|---|-------------------------|----------|--------------------|-----------|----------|----------------------------------|----------------|------------------|----------|---------------------------|---------------------|------------------------------|-------|----------------|----|----------------------|------------|----------------------|---------|----------------|----------|------------------|
| <u>Canadian Malartic</u>  |                         |          |                    |           |          | 20                               | 24E            | <u>2025E</u>     | Min      | 2026E<br>e life extends   | ; to 203            | <u>2027E</u><br>19 but not s |       | 2028E          |    | 2029E<br>e: UG Comme |            | 2030E<br>roduction b |         | 2031E          |          | 2032             |
| Annual gold production (000's oz)   |                         |          |                    |           |          |                                  | 14             | 443              |          | 443                       |                     | 361                          |       | 520            |    | 542                  |            | 542                  |         | 542            |          | 5                |
| Gold price<br>Total UG Revenue (\$000's)  |                         |          |                    |           |          | \$ 2,1<br>\$ 82,1                |                | 2,100<br>138,330 | \$<br>\$ | 2,100<br>138,330          |                     | 2,100<br>334,963             |       | 2,100<br>3,309 |    |                      | \$<br>\$ 1 | 2,100<br>,029,489    |         |                | \$<br>\$ | 2,10<br>1,029,48 |
|   | % NSR attributable to U | G prod   | duction with       | h a 3% NS | R applie |                                  |                |                  |          |                           | Ş                   | 334,903                      | \$ 50 | 5,305          | Ş  | 1,029,409            | <u>،</u> د | .,029,409            | \$ 1,02 | 5,405          | Ş        | 1,025,40         |
| Royalty Revenue   |                         |          |                    |           |          |                                  | 65 \$          | 4,150            |          | 4,150                     | \$                  | 10,049                       | \$ 25 | 9,649          | \$ | 30,885               | \$         | 30,885               | \$ 3    | 0,885          | \$       | 30,88            |
| Discount rate PV of Cash Flow   | 6.5%                    |          |                    |           |          | \$ 2,4                           | 65 \$          | 3,967            | ć        | 3,864                     | ć                   | 9,183                        | ¢ 7   | 5,704          | ć  | 27,489               | ć          | 27,215               | ¢ 7     | 6,980          | ć        | 26,77            |
| rv ol casil riow  |                         |          |                    |           |          | ş 2,4                            | ç cu           | 3,907            | ç        | 3,804                     | Ş                   | 5,105                        | Ş 20  | 5,704          | Ş  | 27,405               | Ş          | 27,215               | ş 2     | 0,560          | Ş        | 20,77            |
| Total Royalty NAV   |                         | \$       | 337,788            | \$        | 1.69     |                                  |                |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| <u>Côté Gold</u>  |                         |          |                    |           |          | 20                               | 24E            | <u>2025E</u>     |          | <u>2026E</u>              |                     | 2027E                        |       | 2028E          |    | <u>2029E</u>         |            | <u>2030E</u>         |         | <u>2031E</u>   |          | 2032             |
| Annual Gold Production (000's oz)   |                         |          |                    |           |          | 265,1                            | 26             | 438,967          | Min      | e life extends<br>520,809 | to 203              | 9 but not s<br>520,809       |       | 9,649          |    | 156,243              |            | 156,243              | 19      | 7,449          |          | 188,86           |
| Gold Price<br>Total Revenue   |                         |          |                    |           |          |                                  | 00 \$          | 2,100            | \$       | 2,100                     | \$                  |                              |       | 2,100          | \$ |                      | \$         | 2,100                |         | 2,100          | \$       | 2,10             |
| Royalty Revenue   | 0.75%                   |          |                    |           |          | \$ 4,1                           | 76 \$          | 6,914            | Ś        | 8,203                     | s                   | 8,203                        | s i   | 3,027          | s  | 2,461                | Ś          | 2,461                | s       | 3,110          | Ś        | 2,97             |
| Discount Rate   | 6.50%                   |          |                    |           |          | ý -1, <u>-</u>                   | , o            | 0,014            | Ŷ        | 0,200                     | Ŷ                   | 0,205                        | ý .   | ,02,           | Ŷ  | 2,401                | Ŷ          | 2,401                | Ŷ       | 5,110          | Ŷ        | 2,57             |
| PV of Cash Flow   |                         |          |                    |           |          | \$ 4,1                           | 76 \$          | 6,492            | \$       | 7,232                     | \$                  | 6,791                        | \$    | 5,240          | \$ | 1,796                | \$         | 1,686                | \$      | 2,001          | \$       | 1,79             |
| Total Royalty NAV   |                         | Ś        | 44,179             |           | 0.22     |                                  |                |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
|   |                         | <u>,</u> | 44,175             |           | 0.22     |                                  |                |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| São Jorge   |                         |          |                    |           |          | 20                               | 24E            | 2025E            |          | <u>2026E</u>              | Note <sup>,</sup> n | 2027E<br>production          |       | 2028E          |    | <u>2029E</u>         |            | 2030E                |         | 2031E          |          | 2032             |
| Annual gold production (000's oz)   |                         |          |                    |           |          | -                                |                | -                |          | - '                       |                     | -                            |       | 3,733          |    | 104,977              |            | 104,977              | 10      | 4,977          |          | 104,97           |
| Gold price  |                         |          |                    |           |          | \$ 2,1                           |                | 2,100            | \$       | 2,100                     |                     |                              | \$    | 2,100          |    | 2,100                | \$         | 2,100                | \$      | 2,100          | \$       | 2,10             |
| Total Revenue   |                         |          |                    |           |          | \$ -                             | \$             | -                | \$       | -                         | \$                  | -                            | \$ 16 | 5,338          | \$ | 220,451              | \$         | 220,451              | \$ 22   | 0,451          | \$       | 220,45           |
| Royalty Revenue   | 1.0% NSR                |          |                    |           |          |                                  | \$0            | \$0              |          | \$0                       |                     | \$0                          | ¢     | L,653          |    | \$2,205              |            | \$2,205              | 4       | 2,205          |          | \$2,20           |
| Discount rate   | 7.0%                    |          |                    |           |          |                                  |                | ŲŲ               |          | ψŪ                        |                     | ψŪ                           |       |                |    |                      |            |                      |         |                |          |                  |
| PV of Cash Flow   |                         |          |                    |           |          | \$ -                             | \$             | -                | \$       | -                         | \$                  | -                            | \$    | 1,261          | \$ | 1,572                | \$         | 1,469                | \$      | 1,373          | \$       | 1,283            |
| Total Royalty NAV   |                         | \$       | 13,687             | \$        | 0.07     |                                  |                |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| Borborema Gold Project  |                         |          |                    |           |          | <u>20</u>                        | <u>4E</u>      | <u>2025E</u>     |          | <u>2026E</u>              | Note:               | 2027E<br>production          |       | 2028E          |    | <u>2029E</u>         |            | <u>2030E</u>         |         | <u>2031E</u>   |          | 2032             |
| Annual gold production (000's oz)   |                         |          |                    |           |          | -                                |                | 56,774           |          | 83,558                    |                     | 108,740                      |       | L,269          |    | 81,269               |            | 70,967               | 5       | 3,226          |          | 53,220           |
| Gold price  |                         |          |                    |           |          |                                  | 00 \$          | 2,100            | \$       | 2,100                     | \$                  | 2,100                        |       | 2,100          | \$ |                      | \$         | 2,100                |         | 2,100          | \$       | 2,100            |
| Royalty Revenue   | 2.00% NSR               |          |                    |           |          | 1,9                              | 00             | 2,385            |          | 3,509                     |                     | 4,567                        | 3     | 3,413          |    | 3,413                |            | 2,981                |         | 2,235          |          | 2,235            |
| Royalty Revenue + Gold-Linked Loan  | 1.00% NSR post 7        | 750koz   |                    |           |          | \$ 2,8                           | 24 \$          | 3,309            | \$       | 4,433                     | \$                  | 5,491                        | \$    | 1,337          | \$ | 4,337                | \$         | 3,905                | \$      | 3,159          | \$       | 3,159            |
| Discount rate<br>PV of Cash Flow  | 7.0%                    |          |                    |           |          | \$ 2,8                           | 24 \$          | 3,092            | \$       | 3,872                     | \$                  | 4,482                        | \$    | 3,309          | \$ | 3,092                | \$         | 2,602                | \$      | 1,968          | \$       | 1,839            |
| Total Royalty NAV   |                         | \$       | 31,465             | \$        | 0.16     |                                  |                |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| Jerritt Canyon  |                         |          |                    |           |          | 20                               | 24E            | <u>2025E</u>     |          | <u>2026E</u>              |                     | <u>2027E</u>                 | 3     | 2028E          |    |                      |            |                      |         |                |          |                  |
| Annual gold production (000's oz)   |                         |          |                    |           |          | -                                |                | 64               |          | 180                       |                     | 180                          |       | 180            |    |                      |            |                      |         |                |          |                  |
| Gold price  |                         |          |                    |           |          | \$ 2,1                           |                | 2,100            | \$       |                           | \$                  | 2,100                        |       | 2,100          |    |                      |            |                      |         |                |          |                  |
| Total Revenue   |                         |          |                    |           |          | \$ -                             | \$             | 133,828          | \$       | 377,868                   | Ş                   | 377,868                      | \$ 37 | 7,868          |    |                      |            |                      |         |                |          |                  |
| Royalty Revenue   | 0.50% NSR               |          |                    |           |          | \$-                              | \$             | 669              | \$       | 1,889                     | \$                  | 1,889                        | \$    | L,889          |    |                      |            |                      |         |                |          |                  |
| Total Doubles Doubles   | \$0.30 per ton          |          |                    |           |          | \$ -                             | \$             | 128              | \$       |                           | Ş                   |                              | \$    | 360            |    |                      |            |                      |         |                |          |                  |
| Total Royalty Revenue<br>Discount rate  | 7.0%                    |          |                    |           |          | \$ -                             | \$             | 797              | \$       | 2,249                     | Ş                   | 2,249                        | \$    | 2,249          |    |                      |            |                      |         |                |          |                  |
| PV of Cash Flow   |                         |          |                    |           |          | \$ -                             | \$             | 745              | \$       | 1,965                     | \$                  | 1,836                        | \$    | L,716          |    |                      |            |                      |         |                |          |                  |
| Total Royalty NAV   |                         | \$       | 6,261              | \$        | 0.03     |                                  |                |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
|   |                         |          | .,                 |           |          |                                  |                |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| Total Royalty Revenue<br>Total PV of Cash Flow  |                         |          |                    |           |          | \$ 9,4<br>\$ 9,4                 | 64 \$<br>64 \$ | 15,169<br>14,295 | \$<br>\$ | 19,035<br>16,933          | \$<br>\$            |                              |       | 5,916<br>9,230 |    | 39,887<br>33,950     | \$<br>\$   |                      |         | 9,358<br>2,322 |          | 39,22<br>31,69   |
| Current value of cash flow  |                         | \$       | 433,380            | \$        | 2.17     | per diluted sl                   | are            |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| Plus cash & equivalents and ST investments  |                         | \$       | 2,713              |           |          | as of 09/30/2                    |                |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| Value for assets not included in DCF<br>Value for non-core assets from Ely Acquisition (            | at cost)                | \$<br>\$ | 208,316<br>232,250 |           |          | per diluted sl                   |                |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| Value for non-core assets from Ely Acquisition (<br>Value for copper stream from Vares Silver Proje |                         | \$<br>\$ | 232,250 70,000     |           |          | per diluted sl<br>per diluted sl |                | zes a \$5.00 j   | uer G    | nut share is:             | suunce              | price                        |       |                |    |                      |            |                      |         |                |          |                  |
| Value for Granite Creek   |                         | Ş        | 89,189             | \$        | 0.45     | ,<br>per diluted sl              | are            |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| Less debt   |                         | \$       | (48,932)           |           | (0.25)   | per diluted sl                   | are; as        | of 09/30/24      |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| Total current value / NAV per share   |                         | \$       | 986,916            | \$        | 4.95     | per diluted sl                   | are            |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| Target P/NAV Multiple<br>Firm value after P/NAV Multiple  |                         | \$       | 1.10<br>1,085,607  |           | 5.44     | per diluted sl                   | are            |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| Shares outstanding ('000s)  |                         |          | 169.314            | as of 09, | /30/74   |                                  |                |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| Options and Warrants ('000s)  |                         |          | 30,154             | as of 09, |          |                                  |                |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| Fully diluted shares ('000s)  |                         |          | 199,468            |           |          |                                  |                |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| Value per share   |                         | \$       | 5.44               |           | 74.1%    |                                  |                |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| Rounded (\$0.25) price target   |                         | \$       | 5.50               |           | 74.4%    |                                  |                |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| GROY share price  |                         | \$       | 1.41               | as of 11, | /04/202  | 24                               |                |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |
| Source: H.C. Wainwright & Co. estimates.  |                         |          |                    |           |          |                                  |                |                  |          |                           |                     |                              |       |                |    |                      |            |                      |         |                |          |                  |

# Gold Royalty Corp.

### **Important Disclaimers**

This material is confidential and intended for use by Institutional Accounts as defined in FINRA Rule 4512(c). It may also be privileged or otherwise protected by work product immunity or other legal rules. If you have received it by mistake, please let us know by e-mail reply to unsubscribe@hcwresearch.com and delete it from your system; you may not copy this message or disclose its contents to anyone. The integrity and security of this message cannot be guaranteed on the Internet.

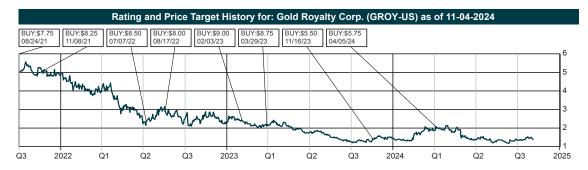
**H.C. WAINWRIGHT & CO, LLC RATING SYSTEM:** H.C. Wainwright employs a three tier rating system for evaluating both the potential return and risk associated with owning common equity shares of rated firms. The expected return of any given equity is measured on a RELATIVE basis of other companies in the same sector. The price objective is calculated to estimate the potential movements in price that a given equity could reach provided certain targets are met over a defined time horizon. Price objectives are subject to external factors including industry events and market volatility.

#### **RETURN ASSESSMENT**

**Market Outperform (Buy):** The common stock of the company is expected to outperform a passive index comprised of all the common stock of companies within the same sector.

**Market Perform (Neutral):** The common stock of the company is expected to mimic the performance of a passive index comprised of all the common stock of companies within the same sector.

Market Underperform (Sell): The common stock of the company is expected to underperform a passive index comprised of all the common stock of companies within the same sector.



Investment Banking Services include, but are not limited to, acting as a manager/co-manager in the underwriting or placement of securities, acting as financial advisor, and/or providing corporate finance or capital markets-related services to a company or one of its affiliates or subsidiaries within the past 12 months.

| Distribution of Ratings Table as of November 4, 2024 |       |         |       |         |  |  |  |  |  |  |
|--|-------|---------|-------|---------|--|--|--|--|--|--|
| IB Service/Past 12 Mon                               |       |         |       |         |  |  |  |  |  |  |
| Ratings  | Count | Percent | Count | Percent |  |  |  |  |  |  |
| Buy  | 565   | 88.01%  | 126   | 22.30%  |  |  |  |  |  |  |
| Neutral  | 71    | 11.06%  | 5     | 7.04%   |  |  |  |  |  |  |
| Sell   | 0     | 0.00%   | 0     | 0.00%   |  |  |  |  |  |  |
| Under Review   | 6     | 0.93%   | 2     | 33.33%  |  |  |  |  |  |  |

H.C. Wainwright & Co, LLC (the "Firm") is a member of FINRA and SIPC and a registered U.S. Broker-Dealer.

I, Heiko F. Ihle, CFA, certify that 1) all of the views expressed in this report accurately reflect my personal views about any and all subject securities or issuers discussed; and 2) no part of my compensation was, is, or will be directly or indirectly related to the specific recommendation or views expressed in this research report; and 3) neither myself nor any members of my household is an officer, director or advisory board member of these companies.

None of the research analysts or the research analyst's household has a financial interest in the securities of Gold Royalty Corp. (including, without limitation, any option, right, warrant, future, long or short position).

As of October 31, 2024 neither the Firm nor its affiliates beneficially own 1% or more of any class of common equity securities of Gold Royalty Corp..

Neither the research analyst nor the Firm knows or has reason to know of any other material conflict of interest at the time of publication of this research report.

The research analyst principally responsible for preparation of the report does not receive compensation that is based upon any specific investment banking services or transaction but is compensated based on factors including total revenue and profitability of the Firm, a substantial portion of which is derived from investment banking services.

The firm or its affiliates received compensation from Gold Royalty Corp. for non-investment banking services in the previous 12 months.

The Firm or its affiliates did receive compensation from Gold Royalty Corp. for investment banking services within twelve months before, and will seek compensation from the companies mentioned in this report for investment banking services within three months following publication of the research report.

H.C. Wainwright & Co., LLC managed or co-managed a public offering of securities for Gold Royalty Corp. during the past 12 months.

The Firm does not make a market in Gold Royalty Corp. as of the date of this research report.

The securities of the company discussed in this report may be unsuitable for investors depending on their specific investment objectives and financial position. Past performance is no guarantee of future results. This report is offered for informational purposes only, and does not constitute an offer or solicitation to buy or sell any securities discussed herein in any jurisdiction where such would be prohibited. This research report is not intended to provide tax advice or to be used to provide tax advice to any person. Electronic versions of H.C. Wainwright & Co., LLC research reports are made available to all clients simultaneously. No part of this report may be reproduced in any form without the expressed permission of H.C. Wainwright & Co., LLC. Additional information available upon request.

H.C. Wainwright & Co., LLC does not provide individually tailored investment advice in research reports. This research report is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of any specific person. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this research report.

H.C. Wainwright & Co., LLC's and its affiliates' salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies that reflect opinions that are contrary to the opinions expressed in this research report.

H.C. Wainwright & Co., LLC and its affiliates, officers, directors, and employees, excluding its analysts, will from time to time have long or short positions in, act as principal in, and buy or sell, the securities or derivatives (including options and warrants) thereof of covered companies referred to in this research report.

The information contained herein is based on sources which we believe to be reliable but is not guaranteed by us as being accurate and does not purport to be a complete statement or summary of the available data on the company, industry or security discussed in the report. All opinions and estimates included in this report constitute the analyst's judgment as of the date of this report and are subject to change without notice.

Securities and other financial instruments discussed in this research report: may lose value; are not insured by the Federal Deposit Insurance Corporation; and are subject to investment risks, including possible loss of the principal amount invested.