

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K/A

Amendment No. 1

(Mark One)

Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the fiscal year ended
December 31, 2022

or

Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the transition period from _____ to _____

Commission file number **001-32978**

SOLITARIO ZINC CORP.

(Exact name of registrant as specified in charter)

Colorado

(State or other jurisdiction of incorporation or organization)

4251 Kipling St. Suite 390, Wheat Ridge, CO

(Address of principal executive offices)

84-1285791

(I.R.S. Employer Identification No.)

80033

(Zip Code)

Registrant's telephone number, including area code **(303) 534-1030**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading symbol	Name of exchange on which registered
Common Stock, \$0.01 par value	XPL	NYSE American

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

YES No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes NO

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes NO

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes NO

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 checked="" type="checkbox"/>	Emerging growth company <input type="checkbox"/>
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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 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

YES NO

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

YES NO

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

YES NO

The aggregate market value of the voting and non-voting common stock held by non-affiliates of the registrant as of the last business day of the registrant's most recently completed second fiscal quarter, based upon the closing sale price of the registrant's common stock on June 30, 2022 as reported on NYSE American, was approximately \$33,511,000.

There were 64,801,373 shares of common stock, \$0.01 par value, outstanding on March 15, 2023.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive Proxy Statement for the Registrant's Annual Meeting of Shareholders, which is expected to be filed by April 30, 2023, have been incorporated by reference into Part III of this Annual Report on Form 10-K.

EXPLANATORY NOTE

This Amendment No. 1 on Form 10-K/A (this "Amendment") to the Annual Report on Form 10-K of Solitario Zinc Corp. (the "Company") for the fiscal year ended December 31, 2022, initially filed with the Securities and Exchange Commission (the "SEC") on March 15, 2023 (the "Original Filing"), is being filed to correct an administrative error in the Original Filing. The Original Filing included a typographical error in the conformed signature of Plante & Moran, PLLC on the Report of Independent Registered Public Accounting Firm (the "Audit Report"). Solitario had received the manually signed Audit Report from Plante & Moran, PLLC prior to filing the Original Filing.

This Amendment is being filed solely to change "/s/ Plante & Moran, LLLC" to "/s/ Plante & Moran, PLLC" in the signature line to the Audit Report. This Amendment includes Item 8, "Financial Statements and Supplementary Data" in its entirety and without change from the Original Filing other than the addition of the conformed signature of Plante & Moran, PLLC on the Audit Report.

In addition, pursuant to the rules of the SEC, the exhibit list included in Item 15 of Part IV of the Original Filing has been amended to contain currently dated certifications from the Company's Chief Executive Officer and Chief Financial Officer, as required by Section 302 of the Sarbanes-Oxley Act of 2002. The certifications of the Company's Chief Executive Officer and Chief Financial Officer are filed as exhibits to this Amendment.

Except for the foregoing amended information, this Amendment does not amend or update any other information contained in the Original Filing. Therefore, this Amendment should be read together with other documents that the Company has filed with the SEC subsequent to the filing of the Original Filing. Information in such reports and documents updates and supersedes certain information contained in the Original Filing.

Item 8. Financial Statements and Supplementary Data

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Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors of Solitario Zinc Corp.

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Solitario Zinc Corp. (the "Company") as of December 31, 2022 and 2021, the related statements of operations, shareholders' equity, and cash flows for each of the years in the two-year period ended December 31, 2022, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the two-year period ended December 31, 2022, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

The Company's management is responsible for these financial statements. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

Critical audit matters are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved especially challenging, subjective, or complex judgments. We determined that there are no critical audit matters.

/s/ Plante & Moran, PLLC

We have served as the Company's auditor since 2004.

Denver, Colorado
March 15, 2023

SOLITARIO ZINC CORP.
CONSOLIDATED BALANCE SHEETS

(in thousands of U.S. dollars, except share and per share amounts)

	December 31, 2022	December 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	\$ 316	\$ 462
Short-term investments, at fair value	3,951	5,087
Investments in marketable equity securities, at fair value	949	1,307
Prepaid expenses and other	38	303
Total current assets	5,254	7,159
Mineral properties	16,646	16,306
Other assets	134	154
Total assets	\$ 22,034	\$ 23,619
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	\$ 228	\$ 239
Operating lease liability	35	37
Total current liabilities	263	276
Long-term liabilities		
Asset retirement obligation – Lik	125	125
Operating lease liability	-	35
Total long-term liabilities	125	160
Commitments and contingencies (Note 9)		
Shareholders' equity:		
Preferred stock, \$0.01 par value, authorized 10,000,000 shares (none issued and outstanding at December 31, 2022 and 2021)	-	-
Common stock, \$0.01 par value, authorized, 100,000,000 shares (64,801,373 and 62,036,399, respectively, shares issued and outstanding at December 31, 2022 and 2021)	648	620
Additional paid-in capital	74,886	72,523
Accumulated deficit	(53,888)	(49,960)
Total shareholders' equity	21,646	23,183
Total liabilities and shareholders' equity	\$ 22,034	\$ 23,619

See Notes to Consolidated Financial Statements.

SOLITARIO ZINC CORP.
CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share amounts)

	For the years ended December 31,	
	2022	2021
Costs, expenses and other		
Exploration expense	\$ 2,283	\$ 1,198
Depreciation and amortization	29	27
Mineral property impairment	-	17
General and administrative	1,360	952
Total costs, expenses and other	3,672	2,194
Other (expense) income		
Interest and dividend income (net)	131	123
Other income	20	10
Loss on derivative instruments	(4)	(38)
Loss on sale of marketable equity securities	(201)	(248)
Unrealized loss on short-term investments	(108)	(102)
Unrealized (loss) gain on marketable equity securities	(94)	82
Total other income (expense)	(256)	(173)
Net loss	\$ (3,928)	\$ (2,367)
Loss per common share		
basic and diluted	\$ (0.06)	\$ (0.04)
Weighted average shares outstanding		
Basic and diluted	64,263	58,709

See Notes to Consolidated Financial Statements.

SOLITARIO ZINC CORP.
CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2022 AND 2021

(in thousands, of U.S. Dollars
except share amounts)

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Shareholders' Equity
	Shares	Amount			
Balance at December 31, 2020	58,108,366	\$ 581	\$ 70,514	\$ (47,593)	\$ 23,502
Stock option expense	-	-	124	-	124
Issuance of shares – option exercises	185,000	2	81	-	83
Issuance of shares – ATM, net	643,033	6	293	-	299
Issuance of shares – private placement	3,100,000	31	1,511	-	1,542
Net loss	-	-	-	(2,367)	(2,367)
Balance at December 31, 2021	62,036,399	\$ 620	\$ 72,523	\$ (49,960)	\$ 23,183
Stock option expense	-	-	338	-	338
Issuance of shares – option exercises	114,250	1	29	-	30
Issuance of shares – ATM, net	2,650,724	27	1,996	-	2,023
Net loss	-	-	-	(3,928)	(3,928)
Balance at December 31, 2021	64,801,373	\$ 648	\$ 74,886	\$ (53,888)	\$ 21,646

See Notes to Consolidated Financial Statements.

SOLITARIO ZINC CORP.
CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands of U.S. Dollars)	For the year ended December 31,	
	2022	2021
Operating activities:		
Net loss	\$ (3,928)	\$ (2,367)
Adjustments to reconcile net loss to net cash used in operating activities:		
Unrealized loss (gain) on marketable equity securities	94	(82)
Unrealized loss on short-term investments	108	102
Loss on sale of marketable equity securities	201	248
Loss on derivative instruments	4	38
Other income – Paycheck Protection Program loan forgiveness	-	(10)
Mineral property impairment	-	17
Employee stock option expense	338	124
Depreciation	29	27
Amortization of right of use lease asset	40	40
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	265	(277)
Accounts payable and other current liabilities	(51)	(17)
Net cash used in operating activities	(2,900)	(2,157)
Investing activities:		
Sale of short-term investments – net	1,028	609
Additions to mineral property	(340)	(635)
Sale of marketable equity securities	63	147
Sale of derivative instruments – net	-	8
Additions to other assets	(50)	(39)
Net cash provided by investing activities	701	90
Financing activities:		
Issuance of common stock – net of issuance costs	2,023	1,841
Stock options exercised for cash	30	83
Net cash provided by financing activities	2,053	1,924
Net decrease in cash and cash equivalents	(146)	(143)
Cash and cash equivalents, beginning of year	462	605
Cash and cash equivalents, end of year	\$ 316	\$ 462
Supplemental Cash Flow information:		
Accrued mineral property acquisition costs included in accounts payable	\$ -	\$ 60
Acquisition of right to use asset	\$ -	\$ 99

See Notes to Consolidated Financial Statements.

SOLITARIO ZINC CORP.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
For the years ended December 31, 2022 and 2021

1. Business and Summary of Significant Accounting Policies

Business and company formation

Solitario Zinc Corp. ("Solitario," or the "Company") is an exploration stage company as defined by rules issued by the United States Securities and Exchange Commission (the "SEC"). Solitario was incorporated in the state of Colorado on November 15, 1984 as a wholly-owned subsidiary of Crown Resources Corporation ("Crown"). In July 1994, Solitario became a publicly traded company on the Toronto Stock Exchange (the "TSX") through its initial public offering. Solitario has been actively involved in mineral exploration since 1993. Solitario's primary business is to acquire exploration mineral properties or royalties and/or discover economic deposits on its mineral properties and advance these deposits, either on its own or through joint ventures, up to the development stage. At that point, or sometime prior to that point, Solitario would likely attempt to sell its mineral properties, pursue their development either on its own or through a joint venture with a partner that has expertise in mining operations, or create a royalty with a third party that continues to advance the property. Solitario is primarily focused on the acquisition and exploration of precious metal, zinc and other base metal exploration mineral properties. In addition to focusing on its mineral exploration properties and the evaluation of mineral properties for acquisition, Solitario also evaluates potential strategic transactions for the acquisition of new precious and base metal properties and assets with exploration potential or business combinations that Solitario determines to be favorable to Solitario.

Solitario has recorded revenue in the past from the sale of mineral properties. Revenues and / or proceeds from the sale or joint venture of properties or assets have not been a consistent annual source of cash and would only occur in the future, if at all, on an infrequent basis.

Solitario currently considers its carried interest in the Florida Canyon project in Peru, its interest in the Lik project in Alaska and its interest in the Golden Crest project in South Dakota to be its core mineral property assets. Nexa Resources, Ltd. ("Nexa"), Solitario's joint venture partner, is continuing the exploration and furtherance of the Florida Canyon project and Solitario is monitoring progress at Florida Canyon. Solitario is working with its 50% joint venture partner, Teck American Incorporated, a wholly owned subsidiary of Teck Resources Limited (both companies are referred to as "Teck"), in the Lik deposit to further the exploration of the Lik project, and to evaluate potential development plans for the Lik project. Solitario is conducting mineral exploration of its Golden Crest project on its own.

As of December 31, 2022 and 2021, Solitario has balances of cash and short-term investments that Solitario anticipates using, in part, to further the development of the Florida Canyon project, the Lik project and the Golden Crest project and to potentially acquire additional mineral property assets. The fluctuations in precious metal and other commodity prices have contributed to a challenging environment for mineral exploration and development, which has created opportunities as well as challenges for the potential acquisition of early-stage and advanced mineral exploration projects or other related assets at potentially attractive terms.

Financial reporting

The consolidated financial statements include the accounts of Solitario and its wholly owned subsidiaries. All significant intercompany accounts and transactions have been eliminated in consolidation. The consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America ("generally accepted accounting principles") and are expressed in US dollars.

Revenue recognition

Solitario has recorded revenue from the sale of exploration mineral properties and joint venture property payments. Solitario's policy is to recognize revenue from the sale of its exploration mineral properties (those without reserves) on a property-by-property basis, computed as the cash received and / or collectable receivables less any capitalized cost. Payments received for the sale of exploration property interests that are less than the properties cost are recorded as a reduction of the related property's capitalized cost. In addition, Solitario's policy is to recognize revenue on any receipts of joint venture property payments in excess of its capitalized costs on a property that Solitario may lease to another mining company.

Solitario has not recognized any revenue during 2022 or 2021. Solitario expects any property sales in the future to be on an infrequent basis. Solitario last recognized revenue in 2019 from the sale of certain royalties and in 2018 from the sale of its royalty in the Yanacocha property. Solitario does not expect to record joint venture property payments on any of its currently held properties for the foreseeable future. Historically, Solitario's revenues have been infrequent and significant individual transactions have only been from sales to well known or vetted mining companies. Solitario has never had a return on any of its sales recorded as revenue in its history and does not anticipate it will recognize any estimated returns on any potential future recorded revenues.

Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Some of the more significant estimates included in the preparation of Solitario's financial statements pertain to: (i) the recoverability of its investment in mineral properties related to its mineral exploration properties and their future exploration potential; (ii) the fair value of stock option grants to employees; (iii) the ability of Solitario to realize its deferred tax assets; and (iv) Solitario's investment in marketable equity securities.

In performing its activities, Solitario has incurred certain costs for mineral properties. The recovery of these costs is ultimately dependent upon the sale of mineral property interests or the development of economically recoverable mineral reserves and the ability of Solitario to obtain the necessary permits and financing to successfully place the properties into production, and upon future profitable operations, none of which is assured.

Cash and cash equivalents

Cash equivalents include investments in highly liquid money-market securities with original maturities of three months or less when purchased. At December 31, 2022, approximately \$293,000 of Solitario's cash and cash equivalents are held in brokerage accounts and foreign banks, which are not covered under the Federal Deposit Insurance Corporation ("FDIC") rules for the United States.

Short-term investments

At December 31, 2022, Solitario has United States Treasury securities ("USTS") with maturities of 15 days to one year, recorded at their fair value of \$3,951,000 compared to USTS recorded at their fair value of \$4,236,000 at December 31, 2021. At December 31, 2021, Solitario also held FDIC insured bank certificates of deposit ("CD's") with face values between \$100,000 and \$250,000 and maturities of three months to one year, which are recorded at their fair value of \$851,000. Solitario's short-term investments are recorded at their fair value based upon quoted market prices. During the year ended December 31, 2022 and 2021 the non-cash decrease in the fair value of its short-term investments, due primarily to changes in interest rates on held securities, was \$108,000 and \$102,000, respectively. The short-term investments are highly liquid and may be sold in their entirety at any time at their quoted market price and are classified as a current asset.

Mineral properties

Solitario expenses all exploration costs incurred on its mineral properties prior to the establishment of proven and probable reserves through the completion of a feasibility study. Initial acquisition costs of its mineral properties are capitalized. Solitario regularly performs evaluations of its investment in mineral properties to assess the recoverability and/or the residual value of its investments in these assets. All long-lived assets are reviewed for impairment whenever events or circumstances change which indicate the carrying amount of an asset may not be recoverable, utilizing established guidelines based upon undiscounted future net cash flows from the asset or upon the determination that certain exploration properties do not have sufficient potential for economic mineralization.

Derivative instruments

Solitario accounts for its derivative instruments in accordance with ASC 815, "Accounting for Derivative Instruments and Hedging Activities" ("ASC 815"). During 2019, Solitario acquired certain Vendetta Mining Corp. ("Vendetta") units, which included Vendetta Warrants (defined below). Changes in fair value of the Vendetta Warrants are recognized in the statements of operations in the period of change as gain or loss on derivative instruments. Solitario has entered into covered calls from time to time on its investment in Kinross Gold Corporation ("Kinross") marketable equity securities. Solitario has not designated its covered calls as hedging instruments and any changes in the fair value of the covered calls are recognized in the statements of operations in the period of the change as gain or loss on derivative instruments.

Fair value

Financial Accounting Standards Board ASC 820, "Fair Value Measurements and Disclosures" ("ASC 820") establishes a framework for measuring fair value and requires enhanced disclosures about fair value measurements. ASC 820 clarifies that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. Solitario's short-term investments in USTS and CD's, its marketable equity securities and any covered call options against those marketable equity securities are carried at their estimated fair value based on quoted market prices. See Note 8, "Fair Value of Financial Instruments," below.

Marketable equity securities

Solitario's investments in marketable equity securities are carried at fair value, which is based upon quoted prices of the securities owned. Solitario records investments in marketable equity securities for investments in publicly traded marketable equity securities for which it does not exercise significant control and where Solitario has no representation on the board of directors of those companies and exercises no control over the management of those companies. The cost and realized gain or loss on marketable equity securities sold is determined by the specific identification method. Changes in fair value on Solitario's holdings of marketable equity securities are recorded as unrealized gain or loss in the consolidated statement of operations.

Foreign exchange

The United States dollar is the functional currency for all of Solitario's foreign subsidiaries. Although Solitario's South American exploration activities during 2022 and 2021 were conducted primarily in Peru, a portion of the payments for the land, leasehold and exploration agreements as well as certain exploration activities are denominated in United States dollars. Inter-company funding is transacted in United States dollars. Foreign currency gains and losses are included in the results of operations in the period in which they occur.

Income taxes

Solitario accounts for income taxes in accordance with ASC 740, "Accounting for Income Taxes" ("ASC 740"). Under ASC 740, income taxes are provided for the tax effects of transactions reported in the financial statements and consist of taxes currently due plus deferred taxes related to certain income and expenses recognized in different periods for financial and income tax reporting purposes. Deferred tax assets and liabilities represent the future tax return consequences of those differences, which will either be taxable or deductible when the assets and liabilities are recovered or settled. Deferred taxes are also recognized for operating losses and tax credits that are available to offset future taxable income and income taxes, respectively. A valuation allowance is provided if it is more likely than not that some portion or all of the deferred tax assets will not be realized.

Accounting for uncertainty in income taxes

ASC 740 clarifies the accounting for uncertainty in income taxes recognized in a company's financial statements. ASC 740 prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. ASC 740 also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure, and transition. ASC 740 provides that a company's tax position will be considered settled if the taxing authority has completed its examination, the company does not plan to appeal, and it is remote that the taxing authority would reexamine the tax position in the future. These provisions of ASC 740 had no effect on Solitario's financial position or results of operations. See Note 6, "Income Taxes," below.

Earnings per share

The calculation of basic and diluted earnings (loss) per share is based on the weighted average number of shares of common stock outstanding during the years ended December 31, 2022 and 2021. Potentially dilutive shares, consisting of outstanding common stock options of 5,390,000 and 5,513,000, respectively, exercisable for Solitario common shares were excluded from the calculation of diluted loss per share for the year ended December 31, 2022 and 2021 because the effects were anti-dilutive.

Employee stock compensation and incentive plans

Solitario classifies all of its stock options as equity options in accordance with the provisions of ASC 718, "Compensation – Stock Compensation." See Note 10, "Employee Stock Compensation Plans," below.

Risks and Uncertainties

Solitario faces risks related to health epidemics and other outbreaks of communicable diseases, which could significantly disrupt its operations and may materially and adversely affect its business and financial conditions.

Solitario's business still could be adversely impacted by the effects of the coronavirus ("COVID-19") or other epidemics or pandemics. Solitario continues to evaluate the effects of COVID-19 on its operations and at times during the pandemic has taken pro-active steps to address the impacts on its operations, including at times reducing costs, in response to the economic uncertainty associated with potential risks from COVID-19. These prior cost reductions included implementing salary reductions and evaluating and reducing certain planned 2021 exploration programs through its joint venture partners at the Florida Canyon and Lik exploration projects. Certain of Solitario's joint venture partners have, from time to time, modified plans with respect to the projects in which Solitario holds an interest in response to the COVID-19 pandemic. Also, Solitario has evaluated the potential impacts on its ability to access future traditional funding sources on the same or reasonably similar terms as in past periods. Solitario will continue to monitor the effects of COVID-19 on its operations, financial condition, and liquidity. However, the extent to which COVID-19 ultimately impacts Solitario's business, including its exploration and other activities and the market for its securities, will depend on future developments, which are highly uncertain and cannot be predicted at this time, and include the duration, severity and scope of any new outbreak and the actions taken to contain or treat the COVID-19 pandemic.

2. Mineral Properties:

The following table details Solitario's capitalized investment in exploration mineral property:

(in thousands)

Exploration	December 31,	
	2022	2021
Lik project (Alaska – US)	\$ 15,611	\$ 15,611
Golden Crest (South Dakota – US)	1,035	695
Total exploration mineral property	\$ 16,646	\$ 16,306

Exploration property

Solitario's exploration mineral properties at December 31, 2022 and 2021 consist of use rights related to its exploration properties, and the value of such assets is primarily driven by the nature and amount of economic mineral ore believed to be contained, or potentially contained, in such properties. The amounts capitalized as mineral properties include concession and lease or option acquisition costs. Capitalized costs related to a mineral property represent its fair value at the time it was acquired or the cost to acquire the property, as appropriate. At December 31, 2022, none of Solitario's exploration properties have production (are operating) or contain proven or probable reserves. Solitario's exploration mineral properties represent interests in properties that Solitario believes have exploration and development potential. Solitario's mineral use rights generally are enforceable regardless of whether proven and probable reserves have been established.

Golden Crest

On May 27, 2021, Solitario entered into a lease agreement (the “Golden Crest Agreement”) whereby Solitario acquired exclusive exploration rights in certain claims (the “GC Claims”) in the Black Hills region of South Dakota. The GC Claims are part of Solitario’s Golden Crest project. Terms of the Golden Crest Agreement include scheduled payments to the underlying owner of \$65,000 paid upon signing and the payment to the underlying owner of \$60,000 at the first anniversary date during 2022. Solitario recorded an initial acquisition cost of \$125,000 during 2021 related to these required payments. In addition, to continue the lease, Solitario has agreed to pay, at its option, the underlying owner escalating annual payments over five years that total \$340,000 and annual payments of \$150,000 thereafter, which will be expensed as paid. Solitario has agreed to pay the underlying owner an additional success fee of \$1.00 per ounce of gold in the event Solitario files a 43-101 qualified resource of up to 1.5 million ounces of gold or a maximum of \$1,500,000. Solitario has agreed to escalating work commitments, at Solitario’s option, on the GC Claims and an area of interest around the GC claims totaling \$3,000,000 during the first five years of the lease, with the first-year minimum exploration expenditures of \$200,000, which Solitario exceeded during 2022. The term of the Golden Crest Agreement is for twenty years and is automatically extended as long as Solitario is performing any exploration, development or mining activities on the GC Claims. The underlying owner retained a 2.0% Net Smelter Return royalty. Solitario will have the option, but not the obligation, to reduce the Net Smelter Return royalty to 1.0% by paying the owner \$1,000,000.

In addition, through December 31, 2022, Solitario has staked additional mineral claims, including some claims included in an area of interest of the GC Claims and claims not related to the GC Claims, as part of the Golden Crest project. As of December 31, 2022 and 2021 Solitario has capitalized costs for staking, initial filing fees, legal and other costs of \$1,035,000 and \$695,000 as initial acquisition costs related to the Golden Crest project.

Lik Property

Solitario holds a 50% operating interest in the Lik zinc-lead sliver property in northwest Alaska, which we acquired as part of the acquisition of Zazu Metals Corporation (“Zazu”) in July 2017. Solitario recorded its acquisition cost of \$15,611,000 as mineral property at the date of acquisition. Teck is Solitario’s 50% partner on the Lik Project and acted as the project manager during 2022 and 2021.

Florida Canyon

In addition to its capitalized exploration properties, Solitario has an interest in its Florida Canyon exploration concessions, which are currently subject to a joint venture agreement where joint venture partners made stand-by joint venture payments to Solitario prior to January 1, 2015. Solitario previously recorded joint venture property payment revenue received in excess of capitalized costs. Per the joint venture agreement, as of December 31, 2022, no further standby joint-venture payments are due to Solitario on the Florida Canyon project. At December 31, 2022 and 2021, Solitario has no remaining capitalized costs related to its Florida Canyon joint venture. Per the joint venture agreement with Nexa covering the Florida Canyon project, Solitario currently holds a 39% interest in the Florida Canyon zinc project. Nexa is required to fund 100% of exploration expenditures at Florida Canyon, until Nexa commits to put the project into production based upon a positive feasibility study, at which time Nexa’s interest will increase from its current 61% interest to a 70% interest.

Discontinued projects

During 2021 Solitario recorded \$17,000 of mineral property impairment related to its decision to abandon its Gold Coin project in Arizona. Solitario did not record any mineral property impairments during 2022.

Exploration Expense

The following items comprised exploration expense:

(in thousands)	For the year ended	
	December 31,	
	2022	2021
Geologic and field expenses	\$ 2,121	\$ 1,092
Administrative	162	106
Total exploration expense	\$ 2,283	\$ 1,198

Asset Retirement Obligation

Solitario recorded an asset retirement obligation of \$125,000 for Solitario’s estimated reclamation cost of the existing disturbance at the Lik project. This disturbance consists of an exploration camp including certain drill sites and access roads at the camp. The estimate was based upon estimated cash costs for reclamation as determined by Solitario and its joint venture partner Teck and is supported by a permitting bond required by the State of Alaska, for which Solitario has retained a reclamation bond insurance policy in the event Solitario or its 50% partner, Teck, do not complete required reclamation.

Solitario has not applied a discount rate to the recorded asset retirement obligation as the estimated time frame for reclamation is not currently known, as reclamation is not expected to occur until the end of the Lik project life, which would follow future development and operations, the start of which cannot be estimated or assured at this time. Additionally, no depreciation will be recorded on the related asset for the asset retirement obligation until the Lik project goes into operation, which cannot be assured.

As of December 31, 2022, Solitario has no reclamation liability at its Florida Canyon project as Nexa is responsible for the costs at Florida Canyon, including reclamation, if any. In addition, the activities to date at Solitario's Golden Crest project of staking claims and mapping, soil and rock sampling, and assaying have not created any material environmental or other disturbances. Historically Solitario's exploration activities have not resulted in any long-term environmental disturbances or liabilities and where there have been required restoration of disturbances, these have been completed contemporaneously with the completion of our mineral exploration activities.

3. Marketable Equity Securities

During 2022 Solitario sold 1,250,000 shares of Vendetta common stock for proceeds of \$63,000 and recorded a realized loss on sale of \$201,000. During 2021, Solitario sold (i) 2,550,000 shares of Vendetta common stock for proceeds of \$112,000 and recorded a realized loss on the sale of \$269,000; (ii) 430,000 shares of TNR Gold Corp. ("TNR") common stock for proceeds of \$27,000 and recorded a realized gain on the sale of \$19,000; and (iii) 3,200 shares of Vox Royalty Corp. ("Vox") common stock for proceeds of \$8,000 and recorded a realized gain on the sale of \$2,000.

On July 31, 2019, Solitario purchased 3,450,000 Vendetta units for aggregate consideration of \$233,000. Each unit consisted of one share of Vendetta common stock and one warrant which allows the holder to purchase one additional share of Vendetta common stock at a purchase price of Cdn\$0.13 per share for a period of three years (the "Vendetta Warrants"). The Vendetta Warrants expired unexercised during 2022. During 2022 and 2021, Solitario recorded a loss on derivative instruments of \$4,000 and \$46,000, respectively, for the change in the value of the Vendetta Warrants.

At December 31, 2022 Solitario owns the following marketable equity securities:

	Year ended December 31, 2022		Year ended December 31, 2021	
	shares	Fair value (000's)	shares	Fair value (000's)
Kinross Gold Corp	100,000	\$ 409	100,000	\$ 581
Vendetta Mining Corp.	7,750,000	229	9,000,000	356
Vox Royalty Corp.	134,055	311	134,055	370
Highland Silver Corp.	200,000	-	-	-
Total		\$ 949		\$ 1,307

The following tables summarize Solitario's marketable equity securities and adjustments to fair value:

(in thousands)	Year ended December 31,	
	2022	2021
Marketable equity securities at cost	\$ 1,440	\$ 1,704
Cumulative unrealized loss on marketable equity securities	(491)	(397)
Marketable equity securities at fair value	\$ 949	\$ 1,307

The following table represents changes in marketable equity securities:

(in thousands)	Year ended December 31,	
	2022	2021
Cost of marketable equity securities sold	\$ 264	\$ 395
Realized loss on marketable equity securities sold	(201)	(248)
Proceeds from the sale of marketable equity securities sold	(63)	(147)
Net loss on marketable equity securities	(295)	(166)
Additions to marketable equity securities	-	-
Change in marketable equity securities at fair value	\$ (358)	\$ (313)

The following table represents the realized and unrealized gain (loss) on marketable equity securities:

(in thousands)	Year ended December 31,	
	2022	2021
Unrealized (loss) gain on marketable equity securities	\$ (94)	\$ 82
Realized loss on marketable equity securities sold	(201)	(248)
Net loss on marketable equity securities	\$ (295)	\$ (166)

Other Income

During 2022, Solitario sold rights to certain exploration data on a non-owned mineral property upon which Solitario had previously done exploration activities. The data was sold to Highland Silver Corp., a Canadian exploration company ("Highland") for \$20,000 cash and 200,000 shares of Highland common stock. On the date of sale, the Highland common stock carried a restrictive legend. The shares were not available for trade on the date of sale and at December 31, 2022 and no value has been assigned to the common stock. Solitario recorded \$20,000 of other income on the date of the sale. Any future changes to the value of the Highland common stock owned by Solitario will be recorded as changes in value of marketable equity securities.

4. Operating Lease

Solitario accounts for its leases in accordance with ASC 842. Solitario leases one facility, its Wheat Ridge, Colorado administrative office (the "WR Lease"), that has a term of more than one year. Solitario has no other significant operating lease costs. The WR Lease was extended to October 2023 during 2021 and Solitario recorded a net increase in right of use assets of \$99,000 during 2021 upon the extension of the WR Lease. The WR Lease is classified as an operating lease and has a remaining term of 10 months at December 31, 2022. The right-of-use office lease asset for the WR Lease is classified as other assets and the related liability as a current office lease liability in the consolidated balance sheet. Lease expense is recognized on a straight-line basis over the lease term, with variable lease payments recognized in the period those payments are incurred.

During 2022 and 2021, Solitario recognized \$40,000 and \$40,000, respectively, of non-cash lease expense for the WR Lease included in general and administrative expense. Cash lease payments of \$39,000 and \$39,000, respectively, were made on the WR Lease during 2022 and 2021 and this amount, less \$3,000 and \$4,000, respectively, of imputed interest during 2022 and 2021, reduced the related liability on the WR Lease. The discount rate within the WR Lease is not determinable and Solitario applied a discount rate of 5% based upon Solitario's estimate of its cost of capital in recording the WR Lease. Solitario has \$36,000 remaining cash payments as of December 31, 2022.

The following is supplemental cash flow information related to our operating lease for 2022 and 2021:

(in thousands)	Year ended December 31, 2022	Year ended December 31, 2021
	Cash paid for amounts included in the measurement of lease liabilities	
Operating cash outflows from WR Lease payments	\$ 39	\$ 39
Non-cash amounts related to the WR lease		
Right of use assets recorded in exchange for new operating lease liabilities	\$ -	\$ 99

5. Other Assets

The following items comprised other assets:

(in thousands)	December 31,	
	2022	2021
Furniture and fixtures, net of accumulated depreciation	\$ 97	\$ 65
Lik project equipment, net of accumulated depreciation	-	10
Office lease asset	33	72
Vendetta warrants	-	3
Exploration bonds and other assets	4	4
Total other assets	\$ 134	\$ 154

6. Income Taxes:

Consolidated loss before income taxes includes losses from foreign operations of \$37,000 and \$136,000 in 2022 and 2021, respectively.

The net deferred tax assets/liabilities in the December 31, 2022 and 2021 consolidated balance sheets include the following components:

(in thousands)	2022	2021
Deferred tax assets:		
Loss carryovers	\$ 11,652	\$ 12,148
Investment in Mineral Property	1,669	1,669
Capitalized Exploration Costs	778	418
Stock option compensation expense	152	309
Unrealized loss on derivative securities	121	98
Other	65	91
Unrealized loss on short-term investments	20	-
Lease Liability	9	18
Valuation allowance	(14,309)	(14,561)
Total deferred tax assets	157	190
Deferred tax liabilities:		
Unrealized gains on marketable equity securities	149	173
Lease Asset	8	17
Total deferred tax liabilities	157	190
Net deferred tax liabilities	\$ -	\$ -

A reconciliation of expected federal income taxes on income (loss) from continuing operations at statutory rates, with the expense for income taxes is as follows:

(in thousands)	2022	2021
Expected income tax benefit	\$ (825)	\$ (497)
Equity based compensation	238	4
Foreign tax rate differences	(3)	(12)
State income tax	(166)	(98)
Expiration of Capital Loss and Foreign Tax Credit Carryovers	18	1,385
Adjustment to Deferred Taxes	11	(82)
Foreign currency exchange	968	(32)
Change in valuation allowance	(251)	(489)
Change in Tax Rates	13	(194)
Permanent differences and other	(3)	15
Income tax (benefit) expense	\$ -	\$ -

During 2022, the valuation allowance increased primarily due to the addition of deferred tax assets related to current year net operating losses. During 2021, the valuation allowance decreased primarily due to the expiration of capital loss carryovers.

At December 31, 2022, Solitario has unused US Federal net operating loss carryovers of \$22,905,000 and unused US State net operating loss carryovers of \$24,811,000 which begin expiring in 2027. As a result of the ownership change of Zazu Metals (Alaska) Corp, utilization of some of these federal and state losses will be limited due to the annual limitation provided by Section 382 of the Internal Revenue Code. Solitario has unused capital loss carryovers of \$380,000 for US Federal and US State purposes which begin expiring in 2025. Solitario has Canadian loss carryforwards of \$9,294,000 which begin expiring in 2027. Other foreign loss carryforwards for which Solitario has provided a full valuation allowance related to Solitario's exploration activities in Peru. The Peru losses do not expire.

Solitario adopted ASC 740, which prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. ASC 740 requires that Solitario recognize in its consolidated financial statements only those tax positions that are “more-likely-than-not” of being sustained as of the adoption date, based on the technical merits of the position. As a result of the implementation of ASC 740, Solitario performed a comprehensive review of its material tax positions in accordance with recognition and measurement standards established by ASC 740. The provisions of ASC 740 had no effect on Solitario’s financial position, cash flows or results of operations at December 31, 2022 or December 31, 2021, or for the years then ended as Solitario had no unrecognized tax benefits.

Solitario and its subsidiaries are subject to the following material taxing jurisdictions: United States Federal, State of Colorado, State of Alaska, State of South Dakota, Canada and Peru. Solitario’s United States federal, Canada and State of Alaska returns for years 2019 and forward and Solitario’s Peru and State of Colorado returns for tax years 2018 and forward are subject to examination. Solitario’s policy is to recognize interest and penalties related to uncertain tax benefits in income tax expense. Solitario has no accrued interest or penalties related to uncertain tax positions as of December 31, 2022, or December 31, 2021 or for the years then ended.

7. Derivative Instruments:

Covered call options

From time-to-time Solitario has sold covered call options against its holdings of shares of common stock of Kinross included in Marketable Equity Securities. The business purpose of selling covered calls is to provide additional income on a limited portion of shares of Kinross that Solitario may sell in the near term, which is generally defined as less than one year and any changes in the fair value of its covered calls are recognized in the statement of operations in the period of the change. During 2021, Solitario sold covered calls against its holdings of Kinross for cash proceeds of \$8,000 all of which expired unexercised. As of December 31, 2022 and 2021, Solitario has no remaining liability related to Kinross call options.

8. Fair Value of Financial Instruments:

For certain of Solitario’s financial instruments, including cash and cash equivalents, payables and short-term debt, the carrying amounts approximate fair value due to their short maturities. Solitario’s marketable equity securities, including its investment in shares of Kinross common stock, Vendetta common stock, Vox common stock and TNR common stock are carried at their estimated fair value based on publicly available quoted market prices.

Solitario applies ASC 820 that establishes a framework for measuring fair value and requires enhanced disclosures about fair value measurements. ASC 820 clarifies that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. ASC 820 also requires disclosure about how fair value is determined for assets and liabilities and establishes a hierarchy for which these assets and liabilities must be grouped, based on significant levels of inputs as follows:

Level 1: Quoted prices in active markets for identical assets or liabilities;

Level 2: Quoted prices in active markets for similar assets and liabilities and inputs that are observable for the asset or liability; or

Level 3: Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

The determination of where assets and liabilities fall within this hierarchy is based upon the lowest level of input that is significant to the fair value measurement. During the years ended December 31, 2022 and 2021, there were no reclassifications in financial assets or liabilities between Level 1, 2 or 3 categories.

The following is a listing of Solitario's financial assets and liabilities required to be measured at fair value on a recurring basis and where they are classified within the hierarchy as of December 31, 2022:

(in thousands)	Level 1	Level 2	Level 3	Total
Assets				
Short-term investments	\$ 3,951	\$ -	\$ -	\$ 3,951
Marketable equity securities	\$ 949	\$ -	\$ -	\$ 949

The following is a listing of Solitario's financial assets and liabilities required to be measured at fair value on a recurring basis and where they are classified within the hierarchy as of December 31, 2021:

(in thousands)	Level 1	Level 2	Level 3	Total
Assets				
Short-term investments	\$ 5,087	\$ -	\$ -	\$ 5,087
Marketable equity securities	\$ 1,307	\$ -	\$ -	\$ 1,307
Vendetta Warrants	\$ -	\$ 3	\$ -	\$ 3

Items measured at fair value on a recurring basis:

Short-term investments: At December 31, 2022 and 2021, Solitario's holdings of short-term investments consist of USTS and CD's at December 31, 2021, both recorded at their fair value based upon quoted market prices.

Marketable equity securities: At December 31, 2022 and 2021, the fair value of Solitario's holdings in shares of Vendetta, Kinross, and Vox marketable equity securities are based upon quoted market prices.

Vendetta Warrants: At December 31, 2021 the fair value of Solitario's Vendetta Warrants is based upon a Black Scholes model, using market inputs.

During the year ended December 31, 2022, Solitario did not change any of the valuation techniques used to measure its financial assets and liabilities at fair value.

9. Commitments and Contingencies:

In acquiring its interests in mineral claims and leases, Solitario has entered into lease agreements, which may be canceled at its option without penalty. Solitario is required to make minimum rental and option payments in order to maintain its interests in certain claims and leases. See Note 2, "Mineral Properties," above. Solitario estimates its 2023 property claim, lease and option payments for properties Solitario owns, has under joint venture or Solitario operates to be approximately \$1,274,000. Assuming that Solitario's joint ventures continue in their current status and that Solitario does not appreciably change its property positions on existing properties, approximately \$419,000 of these estimated 2023 property claim, lease and rental payments are paid or are reimbursable to us by Solitario's joint venture partners. Solitario may be required to make further payments in the future if it acquires new properties or enters into new agreements.

10. Employee Stock Compensation Plans:

On June 18, 2013, Solitario's shareholders approved the Solitario Exploration & Royalty Corp. Omnibus Stock Incentive Plan (the "2013 Plan"). Under the terms of the 2013 Plan, as amended, a total of 5,750,000 shares of Solitario common stock are reserved for awards to directors, officers, employees and consultants. Awards granted under the 2013 Plan may take the form of stock options, stock appreciation rights, restricted stock, and restricted stock units. The terms and conditions of the awards are pursuant to the 2013 Plan and are granted by the Board of Directors or a committee appointed by the Board of Directors.

a.) 2013 Plan stock option grants

The following table shows the grant date fair value of Solitario's awards during 2022 and 2021 pursuant to the 2013 Plan:

Grant Date	9/8/22 (1)	5/5/21 (1)	6/10/21 (1)
Option – grant date price	\$ 0.60	\$ 0.67	\$ 0.69
Options granted	2,360,000	90,000	50,000
Expected life years	5.0	5.0	5.0
Expected volatility	73%	76%	76%
Risk free interest rate	3.4%	0.9%	0.9%
Weighted average fair value	\$ 0.37	\$ 0.41	\$ 0.41
Grant date fair value	\$ 876,000	\$ 37,000	\$ 20,000

(1) Option grants have a five-year term, and vest 25% on date of grant and 25% on each of the next three anniversary dates.

b.) Stock option activity

During 2022 and 2021, options for 114,250 and 185,000, respectively, shares of common stock were exercised for proceeds of \$30,000 and \$83,000 respectively. The following table summarizes the activity for stock options outstanding under the 2013 Plan for the years ended December 31, 2022 and 2021:

	2022			2021		
	RSUs/ Options	Weighted Average Exercise Price	Aggregate Intrinsic Value (1)	RSUs/ Options	Weighted Average Exercise Price	Aggregate Intrinsic Value (1)
Outstanding, beginning of year	5,513,000	\$ 0.49		5,558,000	\$ 0.58	
Granted	2,360,000	\$ 0.60		140,000	\$ 0.67	
Exercised	(114,250)	\$ 0.26		(185,000)	\$ 0.45	
Expired	(2,360,000)	\$ 0.77		-	-	
Forfeited	(8,750)	\$ 0.20		-	-	
Outstanding, end of year	5,390,000	\$ 0.42	\$ 1,034,000	5,513,000	\$ 0.49	\$ 718,000
Exercisable, end of year	3,227,500	\$ 0.34	\$ 899,000	4,718,000	\$ 0.53	\$ 506,000

(1) Intrinsic value based upon December 31, 2022 and 2021 price of a share of Solitario common stock as quoted on the NYSE American exchange of \$0.62 and \$0.50, respectively, per share.

During the years ended December 31, 2022 and 2021, Solitario recorded \$338,000 and \$124,000, respectively, of stock option expense under the 2013 Plan for the amortization of the grant date fair value of each of its outstanding options with a credit to additional paid-in-capital. At December 31, 2022, the total unrecognized stock option compensation cost related to non-vested options is \$618,000 and is expected to be recognized over a weighted average period of 31 months.

11. Shareholders' Equity

At the Market Offering Agreement

On February 2, 2021, Solitario entered into an at-the-market offering agreement (the "ATM Agreement") with H. C. Wainwright & Co., LLC ("Wainwright"), under which Solitario may, from time to time, issue and sell shares of Solitario's common stock through Wainwright as sales manager in an at-the-market offering under a prospectus supplement for aggregate sales proceeds of up to \$9.0 million (the "ATM Program"). The common stock is distributed at the market prices prevailing at the time of sale. As a result, prices of the common stock sold under the ATM Program may vary as between purchasers and during the period of distribution. The ATM Agreement provides that Wainwright is entitled to compensation for its services at a commission rate of 3.0% of the gross sales price per share of common stock sold. During 2021, Solitario recorded \$144,000 as a charge to additional paid-in-capital for one-time expenses related to entering into the ATM Agreement.

During 2022, Solitario sold 2,650,724 shares of its common stock under the ATM Program at a price of \$ 0.79 per share for net proceeds of \$2,023,000 after commissions and sale expenses. During 2021, Solitario sold an aggregate of 643,033 shares of its common stock under the ATM Program at an average price of \$ 0.68 per share for net proceeds of \$299,000 after commissions, sale, and one-time expenses.

2021 Equity Offering

In December 2021 Solitario completed the sale of 3,100,000 shares of common stock (the “Shares”), at a price of \$0.50 per share (the “Offering”) for net proceeds after expenses of \$1,542,000. Solitario did not engage an underwriter or placement agent for the Offering, and therefore there were no underwriter discounts or commissions or placement agent fees. The sale of the Shares was made through a subscription agreement between Solitario and each respective investor. The Shares were offered and sold pursuant to the Company’s existing shelf registration statement on Form S-3 (File No. 333-249129). Solitario filed a prospectus supplement, dated December 1, 2021, with the SEC in connection with the sale of the securities in the Offering. Three of Solitario’s executive officers participated in the Offering, purchasing 50,000 Shares each, on the same terms as the other investors. The Offering was unanimously approved by Solitario’s Board of Directors and the participation by our executive officers was also unanimously approved by the Audit Committee of the Board of Directors.

Share Repurchase Program

On October 28, 2015, Solitario’s Board of Directors approved a share repurchase program that authorized Solitario to purchase up to two million shares of its outstanding common stock. During 2021, Solitario did not purchase any shares pursuant to the share repurchase program. As of December 31, 2021, Solitario had purchased a total of 994,000 shares for an aggregate purchase price of \$467,000 under the share repurchase program since its inception. The share repurchase plan expired on December 31, 2021 and no additional shares will be purchased under the plan in the future.

13. Subsequent Events

Solitario has evaluated events subsequent to December 31, 2022 to assess the need for potential recognition or disclosure in this report. Such events were evaluated through the date these financial statements were available to be issued. No events have occurred requiring recognition or disclosure through the date of this report.

PART IV

Item 15. Exhibits, Financial Statement Schedules

The following documents are filed as a part of this Annual Report on Form 10-K/A:

1. Financial Statements

The following financial statements contained in Part II, Item 8 are filed as part of this Annual Report on Form 10-K/A:

Consolidated Financial Statements
Report of Independent Registered Public Accounting Firm (Plante & Moran, PLLC, Denver, Colorado, PCAOB ID 166)
Consolidated Balance Sheets as of December 31, 2022 and 2021
Consolidated Statements of Operations for the years ended December 31, 2022 and 2021
Consolidated Statements of Shareholders' Equity for the years ended December 31, 2022 and 2021
Consolidated Statements of Cash Flows for the years ended December 31, 2022 and 2021
Notes to Consolidated Financial Statements

2. Financial Statement Schedules

Financial statement schedules are omitted because they are not required or are not applicable, or the required information is provided in the consolidated financial statements or notes thereto described in Item 15(1) above.

3. Exhibits

The Exhibits listed in the Index to Exhibits, which appears immediately following the signature page and is incorporated herein by reference, are filed as part of this Annual Report on Form 10-K/A.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

SOLITARIO ZINC CORP.

By: /s/ James R. Maronick
James R. Maronick
Chief Financial Officer

Date: March 24, 2023

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ Christopher E. Herald</u> Christopher E. Herald, Chief Executive Officer	Principal Executive Officer and Director	March 24, 2023
<u>/s/ James R. Maronick</u> James R. Maronick, Chief Financial Officer	Principal Financial and Accounting Officer	March 24, 2023
<u>/s/ John Labate</u> John Labate	A majority of the Board of Directors	March 24, 2023
<u>/s/ Brian Labadie</u> Brian Labadie		
<u>/s/ James Hesketh</u> James Hesketh		
<u>/s/ Gil Atzmon</u> Gil Atzmon		
<u>/s/ Debbie Austin</u> Debbie Austin		
<u>/s/ Joshua D. Crumb</u> Joshua D. Crumb		
By: <u>/s/ James R. Maronick</u> James R. Maronick, Attorney-in-fact		

INDEX TO EXHIBITS

Description

<u>3.1</u>	<u>Amended and Restated Articles of Incorporation of Solitario Exploration & Royalty Corp., as Amended (incorporated by reference to Exhibit 3.1 to Solitario's Form 10-Q filed on August 10, 2010)</u>
<u>3.1.1</u>	<u>Articles of Amendment to Restated Articles of Incorporation of Solitario Zinc Corp. (incorporated by reference to Exhibit 3.1 to Solitario's Current Report on Form 8-K filed on July 14, 2017)</u>
<u>3.2</u>	<u>Amended and Restated By-laws of Solitario Zinc Corp., as amended (incorporated by reference to Exhibit 3.1 to Solitario's Form 8-K filed on April 23, 2021)</u>
<u>4.1</u>	<u>Form of Common Stock Certificate of Solitario Zinc (incorporated by reference to Exhibit 4.1 to Solitario's Form 10-Q filed on November 8, 2017)</u>
<u>4.2</u>	<u>Description of Common Stock (incorporated by reference to Exhibit 4.2 to Solitario's Form 10-K filed on March 2, 2020)</u>
<u>10.1#</u>	<u>2013 Solitario Exploration & Royalty Corp. Omnibus Stock and Incentive Plan (incorporated by reference to Exhibit 10.2 to Solitario's Form 8-K filed on June 20, 2013)</u>
<u>10.2#</u>	<u>Change in Control Severance Benefits Agreement between Solitario Resources Corporation and Christopher E. Herald, dated as of March 14, 2007 (incorporated by reference to Exhibit 99.1 to Solitario's Form 8-K filed on March 14, 2007)</u>
<u>10.3#</u>	<u>Change in Control Severance Benefits Agreement between Solitario Resources Corporation and James R. Maronick, dated as of March 14, 2007 (incorporated by reference to Exhibit 99.2 to Solitario's Form 8-K filed on March 14, 2007)</u>
<u>10.4#</u>	<u>Change in Control Severance Benefits Agreement between Solitario Resources Corporation and Walter W. Hunt, dated as of March 14, 2007 (incorporated by reference to Exhibit 99.3 to Solitario's Form 8-K filed on March 14, 2007)</u>
<u>10.5</u>	<u>Framework Agreement for the Exploration and Development of Potential Mining Properties, related to Solitario's 100% owned Florida Canyon project in Peru between Minera Florida Canyon S.A., Minera Solitario Peru S.A.C., Solitario Resources Corporation, and Votorantim Metais – Cajamarquilla S.A., dated March 24, 2007 (incorporated by reference to Exhibit 10.2 to Solitario's Form 8-K filed on October 4, 2007)</u>
<u>10.6#</u>	<u>First Amendment to the 2013 Solitario Exploration & Royalty Corp. Omnibus Stock and Incentive Plan (incorporated by reference to Exhibit 10.1 to Solitario's Form 8-K filed on June 29, 2017)</u>
<u>10.7</u>	<u>At The Market Offering Agreement between Solitario Zinc Corp. and H.C. Wainwright & Co., LLC, dated February 2, 2021 (incorporated by reference to Solitario's Form 8-K filed on February 2, 2021)</u>
<u>14.1</u>	<u>Code of Ethics for the Chief Executive Officer and Senior Financial Officer (incorporated by reference to Exhibit 99.1 to Solitario's Form 8-K filed on July 18, 2006)</u>
<u>21.1**</u>	<u>Subsidiaries of Solitario Zinc Corp.</u>
<u>23.1**</u>	<u>Consent of Plante & Moran, PLLC</u>
<u>24.1**</u>	<u>Power of Attorney</u>
<u>31.1*</u>	<u>Certification of Chief Executive Officer pursuant to SEC Rule 13a-14(a)/15d-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</u>

31.2*	Certification of Chief Financial Officer pursuant to SEC Rule 13a-14(a)/15d-14(a) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1*	Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
96.1	Technical Report Summary for the Florida Canyon Project (incorporated by reference to Exhibit 96.1 to Solitario's Form 10-K filed on March 30, 2022)
96.2	Technical Report Summary for the Lik Project (incorporated by reference to Exhibit 96.1 to Solitario's Form 10-K filed on March 30, 2022)
101**	The following materials from the Company's Annual Report on Form 10-K for the year ended December 31, 2021 formatted in Inline eXtensible Business Reporting Language (iXBRL): (i) Condensed Consolidated Balance Sheets as of December 31, 2022 and 2021, (ii) Condensed Consolidated Statements of Operations for the years ended December 31, 2022 and 2021, (iii) Condensed Consolidated Statements of Cash Flows for the years ended December 31, 2022 and 2021; and (iv) Notes to the Condensed Unaudited Consolidated Financial Statements.

- * Filed herewith
- ** Filed with the Original Filing on March 15, 2023
- # Designates a management contract, or a compensatory plan or arrangement.

CERTIFICATIONS

I, Christopher E. Herald, certify that:

1. I have reviewed this annual report on Form 10-K/A of Solitario Zinc Corp. for the year ended December 31, 2022.
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) and we have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 24, 2023

By: /s/ Christopher E. Herald

Christopher E. Herald

President and Chief Executive Officer

CERTIFICATIONS

I, James R. Maronick, certify that:

1. I have reviewed this annual report on Form 10-K/A of Solitario Zinc Corp. for the year ended December 31, 2022.
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) and we have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 24, 2023

By: /s/ James R. Maronick

James R. Maronick

Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Solitario Zinc Corp. (the "Company") on Form 10-K/A for the period ended December 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, Christopher E. Herald, Chief Executive Officer, and James R. Maronick, Chief Financial Officer, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to our knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934.
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/Christopher E. Herald

Christopher E. Herald
Chief Executive Officer

/s/James R. Maronick

James R. Maronick
Chief Financial Officer

Dated: March 24, 2023

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