CEMATRIX™

Cellular Concrete Solutions

CEMATRIX CORPORATION

Consolidated Financial Statements

(in 000's Canadian dollars)

December 31, 2021, and 2020

To the Shareholders:

CEMATRIX CORPORATION

Management has responsibility for preparing the accompanying consolidated financial statements. The consolidated financial statements have been prepared by management in accordance with International Financial Reporting Standards. When alternative methods exist, management has chosen those it deems most appropriate in the circumstances. Financial statements are not precise since they include certain amounts based on estimates and judgement. Management has determined such amounts on a reasonable basis in order to ensure that the consolidated financial statements are presented fairly, in all material respects. Management has developed and maintains appropriate accounting and systems of internal control designed to provide reasonable assurance that reliable and relevant financial information is produced. In addition, programs of proper business conduct and risk management have been implemented to protect the Company's assets and operations. Policies and procedures are designed to give reasonable assurance that transactions are appropriately authorized, assets are safeguarded from loss or misuse and financial records are properly maintained to provide reliable financial information for the preparation of the consolidated financial statements.

The Board of Directors (the "Board") is responsible for ensuring that management fulfills its responsibilities for financial reporting and is ultimately responsible for reviewing and approving the consolidated financial statements. The Board carries out these responsibilities principally through the Audit Committee (the "Committee"), which includes two independent directors.

The Committee has the responsibility of meeting with management and external auditors to discuss the internal controls over the financial reporting process, auditing matters and financial reporting issues. The Committee is also responsible for recommending the appointment of the Company's external auditors. The Committee reviews the consolidated financial statements and the external auditors' report thereon and reports its findings to the Board for approval.

MNP LLP, an independent firm of Chartered Professional Accountants is appointed by the shareholders to audit the consolidated financial statements and to report directly to them; their report follows. The external auditors have full and free access to, and meet periodically and separately with, both the Committee and management to discuss their audit findings.

April 13, 2022

Signed "Randy Boomhour"
Randy Boomhour, CPA, CMA
Chief Financial Officer

Independent Auditor's Report

MNP LLP

To the Shareholders of Cematrix Corporation:

Opinion

We have audited the consolidated financial statements of Cematrix Corporation and its subsidiaries (the "Company"), which comprise the consolidated statements of financial position as at December 31, 2021 and December 31, 2020, and the consolidated statements of loss and comprehensive loss, changes in shareholders' equity and cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as at December 31, 2021 and December 31, 2020, and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with International Financial Reporting Standards.

Basis for Opinion

We conducted our audits in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audits of the consolidated financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Information

Management is responsible for the other information. The other information comprises Management's Discussion and Analysis.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audits of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audits or otherwise appears to be materially misstated. We obtained Management's Discussion and Analysis prior to the date of this auditor's report. If, based on the work we have performed on this other information, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audits and significant audit findings, including any significant deficiencies in internal control that we identify during our audits.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

The engagement partner on the audit resulting in this independent auditor's report is Scott Laluk.

MNP LLP

Calgary, Alberta
April 13, 2022

Chartered Professional Accountants

CEMATRIX CORPORATION

Consolidated Statements of Financial Position

As at December 31, 2021, and 2020
(in 000's Canadian Dollars)

ASSETS		**2021**		2020
Current Assets				
Cash and cash equivalents	**$**	**19,945**	$	2,475
Restricted cash *(note 9)*		**286**		286
Trade and other receivables *(note 5)*		**4,911**		4,329
Inventory *(note 6)*		**718**		692
Prepaid expenses and deposits		**577**		324
		26,437		8,106
Non-Current Assets				
Property and equipment *(note 7)*		**12,171**		13,144
Goodwill and intangibles *(note 8)*		**5,754**		7,274
Convertible debt – non-cash derivative asset *(note 15)*		**27**		314
		17,952		20,732
Total Assets	**$**	**44,389**	$	28,838
LIABILITIES and EQUITY				
Current Liabilities				
Bank operating loan *(note 9)*	**$**	**-**	$	129
Trade and other payables *(note 11)*		**3,204**		2,433
Current portion of long-term debt *(note 12)*		**877**		1,059
Current portion of lease obligations *(note 13)*		**578**		584
Current portion of earn-out liability *(note 14)*		**-**		2,128
Current portion of convertible debt – host debt *(note 15)*		**-**		3,142
Current portion of convertible debt – non-cash derivative liability *(note 15)*		**-**		6,398
		4,659		15,873
Non-Current Liabilities				
Long-term debt *(note 12)*		**2,726**		4,909
Lease obligations *(note 13)*		**1,106**		1,481
Convertible debt – host debt *(note 15)*		**3,107**		3,787
Deferred tax liability *(note 20)*		**1,210**		2,109
		8,149		12,286
Total Liabilities		**12,808**		28,159
Subsequent events *(note 28)*				
SHAREHOLDERS' EQUITY				
Share capital *(note 16)*		**42,403**		13,802
Convertible debt – equity component *(note 15)*		**532**		656
Contributed surplus		**7,002**		2,637
Accumulated other comprehensive loss		**(549)**		(464)
Deficit		**(17,807)**		(15,952)
Total Shareholders' Equity		**31,581**		679
Total Liabilities and Shareholders' Equity	**$**	**44,389**	$	28,838

Approved on behalf of the Board

Signed "Jeffrey Kendrick" **Director** *Signed "Steve Bjornson"* **Director**

The accompanying notes are an integral part of these consolidated financial statements.

CEMATRIX CORPORATION

Consolidated Statements of Loss and Comprehensive Loss

For the years ended December 31, 2021, and 2020
(in 000's Canadian Dollars, except per share and share data)

		2021		2020
Revenue *(note 27)*	**$**	**22,601**	$	26,564
Cost of sales *(note 17)*		**(18,703)**		(20,946)
Gross margin		**3,898**		5,618
Operating expenses				
General and administrative		**(4,600)**		(4,515)
Sales, marketing, and engineering		**(2,030)**		(2,050)
Total operating expenses		**(6,630)**		(6,565)
Operating income (loss)		**(2,732)**		(947)
Non-cash stock-based compensation *(note 22)*		**(274)**		(103)
Finance costs *(note 18)*		**(959)**		(1,550)
Other income (expenses) *(note 19)*		**470**		456
Amortization of intangibles *(note 8)*		**(718)**		(768)
Impairment of intangibles *(note 8)*		**(768)**		-
Accretion costs *(note 18)*		**(346)**		(613)
Revaluation of earn-out liability *(note 14)*		**132**		80
Non-cash fair value adjustment of derivatives *(note 15)*		**2,495**		(6,130)
Loss before income taxes		**(2,700)**		(9,575)
Provision for deferred taxes *(note 20)*		**932**		24
Provision for current taxes *(note 20)*		**(87)**		(225)
Loss attributable to the common shareholders		**(1,855)**		(9,776)
Unrealized foreign exchange gain (loss) on translation of foreign subsidiary		**(85)**		(340)
Total comprehensive loss for the year	**$**	**(1,940)**	$	(10,116)
Loss per common share *(note 21)*				
Basic and diluted	**$**	**(0.016)**	$	(0.158)
Weighted average number of common shares *(note 21)*				
Basic and diluted		**115,391,931**		62,051,858

The accompanying notes are an integral part of these consolidated financial statements.

CEMATRIX CORPORATION

Consolidated Statements of Changes in Shareholders' Equity

For the years ended December 31, 2021, and 2020
(in 000's Canadian Dollars)

	Share Capital	Contributed Surplus	Accumulated Other Comprehensive Loss	Convertible Debt	Deficit	Total Shareholders' Equity
Balance at December 31, 2020	$ 13,802	$ 2,637	$ (464)	$ 656	$ (15,952)	$ 679
Common shares issued *(note 16)*	4,147	-	-	-	-	4,147
Public offering, net of share issuance costs *(note 16)*	15,224	5,666	-	-	-	20,890
Reclassification of contributed surplus to share capital *(note 16)*	1,918	(1,918)	-	-	-	-
Non-cash stock-based compensation *(note 22)*	-	274	-	-	-	274
Convertible debt conversion *(notes 15 and 16)*	7,298	334	-	(101)	-	7,531
Exercise of broker warrants *(notes 15 and 16)*	14	9	-	(23)	-	-
Net income attributable to common shareholders	-	-	-	-	(1,855)	(1,855)
Unrealized foreign exchange loss on translation of foreign subsidiaries	-	-	(85)	-	-	(85)
Balance at December 31, 2021	$ 42,403	$ 7,002	$ (549)	$ 532	$ (17,807)	$ 31,581

The accompanying notes are an integral part of these consolidated financial statements.

CEMATRIX CORPORATION

Consolidated Statements of Changes in Shareholders' Equity

For the years ended December 31, 2021, and 2020
(in 000's Canadian Dollars)

	Share Capital	Contributed Surplus	Accumulated Other Comprehensive Loss	Convertible Debt	Deficit	Total Shareholders' Equity
Balance at December 31, 2019	$ 10,953	$ 2,945	$ (124)	$ -	$ (6,202)	$ 7,572
Common shares issued *(note 16)*	1,765	-	-	-	-	1,765
Reclassification of contributed surplus to share capital *(note 16)*	622	(622)	-	-	-	-
Non-cash stock-based compensation *(note 22)*	-	102	-	-	-	102
Reclassification of contributed surplus to deficit *(note 22)*	-	(26)	-	-	26	-
Issuance of convertible debt	-	-	-	753	-	753
Convertible debt conversion *(notes 15 and 16)*	443	227	-	(67)	-	603
Exercise of broker warrants *(notes 15 and 16)*	19	11	-	(30)	-	-
Net loss attributable to common shareholders	-	-	-	-	(9,776)	(9,776)
Unrealized foreign exchange gain on translation of foreign subsidiaries	-	-	(340)	-	-	(340)
Balance at December 31, 2020	$ 13,802	$ 2,637	$ (464)	$ 656	$ (15,952)	$ 679

The accompanying notes are an integral part of these consolidated financial statements.

CEMATRIX CORPORATION
Consolidated Statements of Cash Flows
For the years ended December 31, 2021, and 2020
(in 000's Canadian Dollars)

	2021	2020
Cash generated from (used in):		
Operating activities		
Net loss attributable to common shareholders	$ (1,855)	$ (9,776)
Add (deduct) non-cash items		
Provision for deferred taxes *(note 20)*	(932)	(24)
Depreciation and amortization *(notes 7 and 8)*	2,486	2,648
Impairment of intangibles (note 8)	768	-
Finance and accretion costs (*note 18)*	1,305	2,164
Non-cash stock-based compensation *(note 22)*	274	102
Loss on sale of equipment *(note 19)*	-	(11)
Non-cash earnout expense *(note 14)*	-	468
Unrealized foreign exchange loss (gain) *(note 19)*	(162)	(97)
Fair value adjustment of derivatives *(note 15)*	(2,495)	6,130
Fair value adjustment in earn-out liability *(note 14)*	(132)	(80)
	(743)	1,524
Net change in non-cash working capital items *(note 23)*	(90)	137
Cash generated from (used in) operating activities	(833)	1,661
Investing activities		
Purchase of property and equipment *(note 7)*	(673)	(122)
Proceeds on sale of property and equipment *(note 7)*	55	49
Purchase of intangibles *(note 8)*	(1)	(3)
Net cash used in investing activities	(619)	(76)
Financing activities		
Repayment of bank operating loan *(note 9)*	(129)	(811)
Repayment of secured debenture *(note 12)*	(1,000)	-
Repayment of long-term debt *(note 12)*	(1,319)	(1,229)
Repayment of finance lease obligations *(note 13)*	(611)	(519)
Repayment of earn-out liability *(note 14)*	(2,047)	-
Proceeds from convertible debt *(note 15)*	-	4,836
Proceeds from public offering, net of costs *(note 16)*	20,890	-
Interest paid	(977)	(1,458)
Repayment of US operating loan *(note 10)*	-	(2,631)
Proceeds from US operating loan *(note 10)*	-	336
Proceeds from exercise of options and warrants *(note 16)*	4,147	1,765
Cash generated from financing activities	18,954	289
Foreign exchange effect on cash	(32)	(13)
Increase in cash	17,470	1,861
Cash beginning of year	2,761	900
Cash end of year	$ 20,231	$ 2,761
Cash and cash equivalents	19,945	2,475
Restricted cash *(note 9)*	286	286
	$ 20,231	$ 2,761

The accompanying notes are an integral part of these consolidated financial statements.

1. Corporate information

CEMATRIX Corporation ("CEMATRIX" or the "Company") is a limited company incorporated in the province of Alberta, Canada whose common shares are publicly traded in Canada on the TSX Venture Exchange under the symbol "CVX.V" and in the United States on the OTCBB under the symbol "CTXXF". The Company is domiciled in Canada with its registered office at 9727 – 40th Street S.E., Calgary, Alberta, Canada.

CEMATRIX is a leading manufacturer and supplier of cellular concrete products with applications in a variety of markets across North America. The Company operates through its subsidiaries CEMATRIX (Canada) Inc., CEMATRIX (USA) Inc., MixOnSite USA, Inc. ("MOS"), Pacific International Grout Company ("PIGCO"), and Canadian Cellular Concrete Services Inc. ("CCCS").

The consolidated financial statements of the Company for the year ended December 31, 2021, were authorized for issue in accordance with a resolution of the Board of Directors on April 13, 2022.

2. Basis of preparation

Statement of compliance
These consolidated financial statements for the year ended December 31, 2021, have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB") and interpretations of the International Reporting Interpretation Committee ("IFRIC").

Basis of measurement and going concern
These consolidated financial statements were prepared on a going concern basis under the historical cost convention except for share-based payment transactions and certain financial instruments which are measured at fair value. Unless otherwise stated, all amounts presented in these financial statements are stated in thousands of Canadian dollars. The Company has also reclassified certain comparative figures to conform to the financial statement presentation adopted for the current year.

Use of estimates and judgements
The preparation of consolidated financial statements in conformity with IFRS requires management to make judgements, estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Although these estimates are based on management's best knowledge of the amount, event or actions, actual results ultimately may differ from those estimates. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in note 3.

Functional and presentation currency
These consolidated financial statements are presented in Canadian dollars, which is the Company's functional currency. The functional currency of CEMATRIX (USA) Inc., MOS and PIGCO is U.S. dollars ("USD").

3. Significant accounting judgements, estimates and assumptions

The preparation of the consolidated financial statements in conformity with IFRS requires management to make judgements, estimates and assumptions that affect the reported amounts of assets, liabilities, and contingent liabilities at the date of the consolidated financial statements and reported amounts of revenues and expenses during the reporting period. Judgements, estimates, and assumptions are continuously evaluated and are based on management's experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. However, actual outcomes can differ from these estimates.

COVID-19 Pandemic

The COVID-19 pandemic continued to disrupt global health and the economy in 2021. Notwithstanding ongoing vaccination programs and government policies enacted in response to the pandemic, the construction industry continues to face volatility as each government has responded, and continues to respond, by implementing measures to address the public health threat. The duration of the pandemic and the associated impact to future financial and operational measures are unknown. As a result, the corresponding impacts to key variables including our workforce, supply chain, project pursuit and awards cycle, and project site measures remain uncertain. The situation remains extremely fluid; however, the Company has responded well to the challenges presented to date and is well positioned to continue responding to fluctuating scenarios.

A) Impairment of non-financial assets

The Company assesses impairment on its non-financial assets when it has determined that a potential indicator of impairment exists, or annually in the case of goodwill and indefinite life intangibles. The assessment of the existence of impairment indicators is based on various internal and external factors and involves management's judgement. When an impairment test is performed on an asset or a cash generating unit ("CGU"), management estimates the recoverable amount of the asset or CGU based on its fair value less costs of disposal ("FVLCD") or its value in use ("VIU"). These estimates are based on valuation models requiring the use of a number of assumptions such as forecasts of future cash flows, gross margin, pre-tax discount rate (weighted average cost of capital or "WACC") and perpetual growth rate. These assumptions have a significant impact on the results of impairment tests and on the impairment charge (if required) recorded in the consolidated statement of loss and comprehensive loss. A description of key assumptions used in the impairment tests and a sensitivity analysis of recoverable amounts are presented in note 8.

B) Non-cash stock based compensation

The Company measures the cost of non-cash stock-based compensation transactions with employees by reference to the fair value of the equity instruments. Estimating fair value for non-cash stock-based compensation transactions requires determining the most appropriate valuation model, which is dependent on the terms and conditions of the grant. This estimate also requires determining and making assumptions about the most appropriate inputs to the valuation model including the expected life, forfeiture rate, volatility, and dividend yield of the share option. The Company measures the cost of non-cash stock-based compensation transactions with consultants by reference to the fair value of the services to be performed.

C) Taxes

Uncertainties exist with respect to the interpretation of complex tax regulations and the amount and timing of future taxable income. The Company establishes provisions, based on reasonable estimates, for possible consequences of audits by the tax authorities. The amount of such provisions is based on various factors, such as experience of previous tax audits and differing interpretations of tax regulations by the taxable entity and the responsible tax authority. Deferred tax assets are recognized for all unused tax losses to the extent that it is probable that taxable earnings will be available against which the losses can be utilized. Significant estimates are required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and the level of future taxable earnings together with future tax planning strategies.

D) Fair value of financial instruments

The fair value of financial instruments is determined wherever possible based on observable market data. If not available, the Company uses third-party models, independent price publications, market exchanges, investment dealer quotes and valuation methodologies that utilize observable data. Actual values may significantly differ from these estimates.

E) Provision for expected credit losses

The Company uses a single loss-rate approach to measure expected credit losses of trade and other receivables. Under this approach, the Company determines an average historical loss rate by comparing the total balance of trade and other receivables at various past dates against the amount collected and not collected. This rate is then adjusted based on management judgement to account for current economic conditions, counterparty's present financial condition and the term to maturity of the specified receivable balance. Actual credit loss may significantly differ from this estimate of provision.

F) Useful life of property and equipment and intangible assets

Depreciation and amortization are calculated using a systematic and rational basis, which are based upon an estimate of each assets' useful life and residual value. The estimated useful life and residual value chosen are the Company's best estimate of such and are based on industry norms, historical experience, market conditions and other estimates that consider the period and distribution of future cash inflows.

G) Incremental borrowing rates for leases and lease terms

The incremental borrowing rates are based on judgements including economic environment, term, currency, and the underlying risk inherent to the asset. The carrying balance of the right-of-use assets, lease obligations, and the resulting interest expense and depreciation expense, may differ due to changes in the market conditions and lease term. In addition, lease terms are based on assumptions regarding extension terms that allow for operational flexibility and future market conditions.

H) Identification of CGU's

A CGU is defined as the lowest grouping of integrated assets that generate identifiable cash inflows that are largely independent of the cash inflows of other assets or groups of assets. The allocation of assets into CGUs requires significant judgement and interpretations with respect to the integration between assets, the existence of active markets, similar exposure to market risks, shared infrastructures, and the way in which management monitors the operations. Management has determined that the appropriate CGU's for the Company are Cematrix Canada and Cematrix USA, where the Cematrix USA CGU includes both MOS and PIGCO.

I) Business acquisitions

The Company uses judgement in applying the acquisition method of accounting for business acquisitions and estimates to value identifiable assets and liabilities at the acquisition date. The Company may engage independent third parties to determine the fair value of property, plant and equipment, and intangible assets. Estimates are used to determine cash flow projections, including the period of future benefit, and future growth and discount rates, among other factors. The values placed on the acquired assets and liabilities assumed affect the amount of goodwill recorded on an acquisition.

J) Going Concern

The Company has experienced lower than planned revenue combined with operating losses. Management has assessed and concluded that the going concern assumption is appropriate for a period of at least twelve months following the end of the reporting period. Management has applied significant judgement in arriving at this conclusion including:

- The amount of new sales orders and total revenue to be generated to provide sufficient cash flows to continue to fund operations and other committed expenditures;
- The timing of generating those new sales and the timing of the related cash flows; and
- The strength of the financial position of the Company including the successful completion of recent public offering raising $23 million in gross proceeds.

Given the judgement involved, actual results may lead to a materially different outcome.

4. Significant accounting policies

The significant accounting policies of the Company are outlined on the following pages:

A) *Basis of consolidation*

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiary, CEMATRIX (Canada) Inc. and its subsidiaries: CEMATRIX (USA) Inc. (99.99% owned), MOS (100% owned), PIGCO (100% owned) and Canadian Cellular Concrete Services Inc. (100% owned). Subsidiaries are fully consolidated from the date of acquisition, being the date on which the Company obtains control, and continue to be consolidated until the date that such control ceases. The financial statements of the subsidiaries are prepared for the same period as the parent company, using consistent accounting policies. The Company has consolidated the assets, liabilities, revenues, and expenses of its subsidiaries after the elimination of inter-company transactions and balances.

B) *Cash and cash equivalents*

Cash and cash equivalents include short-term investments with original maturities of three months or less which are considered to be cash equivalents and are recorded at cost, which approximates fair market value.

C) *Inventory*

Inventory is valued at the lower of cost and net realizable value. Cost is determined by the weighted average method. Net realizable value is the estimated selling price in the ordinary course of business. Inventory consists mainly of foaming agent used in the production of the Company's product, cellular concrete. It also includes marketing materials. Inventory is reviewed on a regular basis to ensure the carrying value does not exceed net realizable value. If the carrying value exceeds net realizable value, a write-down is recognized immediately. The write-down may be reversed in a subsequent period if the circumstances which caused it no longer to exist.

D) *Property and equipment*

Property and equipment are stated at cost less accumulated depreciation and accumulated impairment losses, if any. When significant parts of property and equipment are required to be replaced in intervals, the Company recognizes such parts as individual assets with specific useful lives and depreciation, respectively. All other repair and maintenance costs are recognized in the consolidated statement of loss and comprehensive loss as incurred.

Depreciation is calculated on a straight-line basis to recognize the cost less estimated residual value over the estimated useful life of the assets as follows:

Equipment and cellular material processors	3-20 years
Vehicles	7-15 years
Computer equipment and software	5-10 years
Furniture and fixtures	10 years

The assets' residual values, useful lives and methods of depreciation are reviewed at each financial year end and adjusted prospectively, if appropriate.

E) *Intangible assets*

Intangible assets represent foaming agent technology, process licenses, trademarks and product testing costs. Intangible assets acquired separately are measured on initial recognition at cost. The cost of an intangible asset acquired in a business combination is its fair value as at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and any accumulated impairment losses. Internally generated intangible assets, excluding capitalized development costs, are not capitalized and any expenditure is reflected in the consolidated statement of loss and comprehensive loss in the year in which the expenditure is incurred.

The useful lives of intangible assets are assessed as either finite or indefinite.

Intangible assets with finite lives are amortized over the useful economic life and assessed for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at least at each financial year end. Changes in the expected useful life or the expected pattern of consumption of future economic benefits embodied in the asset is accounted for by changing the amortization period or method, as appropriate, and are treated as changes in accounting estimates.

Intangible assets with indefinite useful lives are not amortized, but are tested for impairment annually, either individually or at the CGU level. The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable. If not, the change in useful life from indefinite to finite is made on a prospective basis.

Gains or losses arising from derecognition of an intangible asset are measured as the difference between the net disposal proceeds and the carrying amount of the asset and are recognized in the consolidated statement of loss and comprehensive loss when the asset is derecognized.

F) Impairment of non-financial assets

At the end of each reporting period, the Company reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss, if any. Where it is not possible to estimate the recoverable amount of an individual asset, the Company estimates the recoverable amount of the CGU to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual CGU's, or otherwise they are allocated to the smallest group of CGU's for which a reasonable and consistent allocation basis can be identified.

Intangible assets with indefinite useful lives, goodwill and intangible assets not yet available for use are tested for impairment at least annually, and whenever there is an indication that the asset may be impaired.

Recoverable amount is the higher of FVLCD and VIU. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted. If the recoverable amount of an asset or CGU is estimated to be less than its carrying amount, the carrying amount of the asset or CGU is reduced to its recoverable amount. An impairment loss is recognized immediately in the consolidated statement of loss and comprehensive loss.

Where an impairment loss subsequently reverses for assets with a finite useful life, the carrying amount of the asset or CGU is increased to the revised estimate of its recoverable amount, such that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset or CGU in prior years.
A reversal of an impairment loss is recognized immediately in consolidated statement of loss and comprehensive loss. An impairment loss on intangible assets with an indefinite life and on any goodwill is not reversed.

G) ***Revenue from Contracts with Customers***

IFRS 15 sets out a five-step model for revenue recognition. The core principle is that revenue should be recognized to depict the transfer of goods and services to customers in an amount that reflects the consideration that the Company expects to be entitled for those goods and services.

The Company principally generates revenue from the onsite production and placement of cellular concrete (the "Product") pursuant to contractual arrangements with its customers. This revenue is recognized when control or title of the Product is transferred from the Company and collection is reasonably assured in accordance with specified contract terms. All revenue is generally earned at a point in time and is based on the consideration that the Company expects to receive for the transfer of the Product to the customer.

Revenue is measured based on the consideration specified in a contract with its customers. Payment terms with customers are generally 30 days from the date of the invoice. The Company generally does not have any sales contracts where the period between the transfer of the Product to the customer and payment by the customer exceeds one year. As a result, the Company does not adjust its revenue transactions for the time value of money.

The Company enters contracts with customers that have performance obligations that are unsatisfied (or partially unsatisfied) at the reporting date. The Company applies a practical expedient of IFRS 15 and does not disclose information about the remaining performance obligations that have original expected durations of one year or less, or for performance where the Company has a right to consideration from a customer in an amount that corresponds directly with the value to the customer on the Company's performance to date.

Contract modifications with the Company's customers could change the scope of the contract, the price of the contract, or both. A contract modification exists when the parties to the contract approve the modification in writing. Contract modifications are generally accounted for as part of the existing contract prospectively over the remaining term of the contract.

H) Non-cash stock-based compensation

The Company operates an equity-settled non-cash stock-based compensation plan under which it receives services from employees and consultants as consideration for equity instruments of the Company.

For equity-settled plans, expense is based on the fair value of the awards granted, net of expected forfeitures, on the date of grant. Fair values are determined using observable share prices and/or pricing models such as the Black-Scholes option-pricing model. The expense is recognized over the vesting period, which is the period over which all the specified vesting conditions are satisfied with a corresponding credit to contributed surplus. For awards with graded vesting, the fair value of each tranche is recognized over its respective vesting period.

For grants that expire or are forfeited without being exercised, the Company records a reclassification to deficit of the non-cash stock-based compensation previously recorded to contributed surplus. For grants that are exercised, the Company records a reclassification to share capital of the non-cash stock-based compensation previously recorded to contributed surplus.

At the end of each reporting period, the Company re-assesses its estimates of the number of awards that are expected to vest and recognizes the impact of the revisions in the consolidated statement of loss and comprehensive loss.

I) Loss per common share

Basic loss per common share is calculated by dividing the net loss attributable to common shareholders (the numerator) by the weighted average number of common shares outstanding (the denominator) during the year. The denominator (number of units) is calculated by adjusting the shares issued at the beginning of the year by the number of shares bought back or issued during the year, multiplied by a time-weighting factor.

Diluted loss per common share is calculated by adjusting the denominator for the effects of dilutive share purchase options and any other potential dilutive items. The effects of anti-dilutive potential units are ignored in calculating diluted income per common share. All share purchase options are considered anti-dilutive when the Company is in a loss position, or the average exercise price of the options exceeds the average trading price of the Company's common shares.

J) Government grants and assistance

Government grants are recognized when there is reasonable assurance that the precedent conditions are met and that the grants will be received. The proceeds from the government grants are recorded as other income in profit or loss and are recognized over the same period on a systematic basis, in which the related expenses for which the grant was initially intended are being recognized.

K) Taxes

Tax expenses comprise current and deferred tax. Taxes are recognized in the consolidated statement of loss and comprehensive loss except to the extent it relates to items recognized directly in equity.

Current tax

Current tax expense is based on the results for the year as adjusted for items that are not taxable or not deductible and recognized in profit or loss except to the extent that it relates to items recognized directly in equity, in which case it is recognized in equity. Current tax is calculated using tax rates and laws that were enacted or substantively enacted at the end of the reporting period. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. Provisions are established where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred tax

Deferred taxes are the taxes expected to be payable or recoverable on differences between the carrying amounts of assets in the consolidated statement of financial position and their corresponding tax bases used in the computation of taxable profit and are accounted for using the liability method.

Deferred tax liabilities are generally recognized for all taxable temporary differences between the carrying amounts of assets and their corresponding tax bases. Deferred taxes are measured at the tax rates that are expected to be applied to temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the reporting date. Deferred tax assets are recognized to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilized.

L) Compound financial instruments

When a contract contains an embedded derivative, the economic and risk characteristics of both the embedded derivative and host contract are analyzed to understand whether or not they are closely related and to decide whether the embedded derivative should be accounted for separately from the host contract.

The embedded features in the financial instrument issued by the Corporation are identified at inception. Each feature is evaluated separately and classified either as part of the host liability, as a separate embedded liability or as an equity instrument in accordance with the substance of the contractual arrangement.

M) Convertible Debentures

Compound financial instruments issued by the Company are comprised of convertible debt that can be converted to share capital at the option of the holder. The liability component of a compound financial instrument is recognized initially at the fair value which is equal to the net present value of future cash flows applying an interest rate at the date of issue of a similar liability that does not have an equity convertible option. The equity component is recognized initially as the difference between the fair value of the compound financial instrument as a whole and the fair value of the liability component. Any directly attributable transaction costs are allocated to the liability and equity components in proportion to their initial carrying amounts.

Subsequent to initial recognition, the liability component of a compound financial instrument is measured at amortized cost using the effective interest method. The equity component of a compound financial instrument is not remeasured subsequent to initial recognition. Interest, dividends, losses and gains relating to the financial liability are recognized in the consolidated statement of comprehensive loss.

N) Share capital

The proceeds from the exercise of share options and warrant and issuance of shares from treasury are recorded as share capital in the amount for which the option, warrant, or treasury share enabled the holder to purchase a share in the Company. Share capital issued for non-monetary consideration is recorded at an amount based on fair market value on the date the shares are issued. Commissions paid to underwriters, and other related share issue costs, such as legal, auditing and printing, on the issue of the Company's shares are charged to share capital.

The proceeds from the issue of units consisting of a common share and a share purchase warrant is allocated between common shares and common share purchase warrants on a pro-rata basis on a relative fair value basis, wherein, the fair value of the common shares is based on the market closing price on the date the units are issued; and the fair value of the common share purchase warrants is determined using the Black-Scholes pricing model.

O) Foreign currency translation

Foreign currency denominated assets and liabilities are translated at the exchange rate prevailing at the date of the consolidated statement of financial position for monetary items. Revenues and expenses are translated using exchange rates prevailing at the dates of the transaction. Any exchange gain or loss that arises on translation is included in the consolidated statement of loss and comprehensive loss for the year.

The Company translates the accounts of PIGCO, MOS, and CEMATRIX (USA) Inc. into Canadian dollars using the closing rate of exchange for both monetary and non-monetary assets and liabilities and the average exchange rate for revenues and expenses. The Company records the exchange differences on the translation of net assets whose functional currency is the USD in unrealized foreign exchange gain (loss) on translation of foreign subsidiary in other comprehensive income (loss).

P) Borrowing costs

Borrowing costs are recognized as an expense in the period in which they are incurred unless they are incurred on a qualifying asset. A qualifying asset is an asset that necessarily takes a substantial period (greater than one year) to get ready for its intended use. Interest costs on borrowings incurred to finance a qualifying asset are capitalized during the period that is required to complete and prepare the asset for its intended use.

Q) Financial Instruments

Classification

The Company classifies its financial assets and financial liabilities in the following measurement categories: (i) those to be measured subsequently at fair value through profit or loss ("FVTPL"); (ii) those to be measured subsequently at fair value through other comprehensive income ("FVOCI"); and (iii) those to be measured at amortized cost. The classification of financial assets depends on the business model for managing the financial assets and whether the contractual cash flows represent solely payments of principal and interest ("SPPI"). Financial liabilities are classified as those to be measured at amortized cost unless they are designated as those to be measured subsequently at FVTPL (irrevocable election at the time of recognition). For assets and liabilities measured at fair value, gains or losses are either recorded in net loss or other comprehensive income (loss).

The Company reclassifies financial assets when and only when its business model for managing those assets changes. Financial liabilities are not reclassified.

All financial instruments are initially measured at fair value. The following table summarizes the subsequent measurement for the Company's financial assets and liabilities under IFRS 9:

Financial instrument	Subsequent measurement
Financial asset:	
Cash and cash equivalents	FVTPL
Restricted cash	FVTPL
Trade and other receivables	Amortized cost
Convertible debt – derivative asset	FVTPL
Financial liabilities:	
Bank operating loan	Amortized cost
US operating loan	Amortized cost
Trade and other payables	Amortized cost
Long term debt	Amortized cost
Earn-out liability	FVTPL
Convertible debt – host debt	Amortized cost
Convertible debt – forced conversion and derivative features	FVTPL

Impairment

When assessing impairment of financial assets measured at amortized cost, the Company applies the simplified approach to provide for expected losses prescribed by IFRS 9, which requires the use of the lifetime expected credit losses. In estimating the lifetime expected loss provision, the Company considers historical internal and industry default rates as well as credit ratings of major customers.

Financial assets are derecognized when the contractual rights to the cash flows from the financial asset expire or when the contractual rights to those assets are transferred.

Financial liabilities are derecognized when the obligation is discharged, cancelled, or expired.

R) Business acquisitions

The Company uses the acquisition method of accounting for business acquisitions. Acquired assets and assumed liabilities are recognized at their fair values at the acquisition date. For those acquisitions that include a contingent consideration arrangement, the contingent consideration is measured at its acquisition date fair value and subsequent changes in such fair value amounts are recognized in net loss.

Acquisition-related costs are recognized in net loss as incurred.

Goodwill arising on acquisition is recognized as an asset and initially measured at cost, being the excess of the fair value of consideration paid over the Company's interest in the net fair value of the identifiable assets, liabilities and contingent liabilities recognized. If the net amounts assigned to the assets acquired and liabilities assumed exceed the consideration paid, then the Company is required to reassess the value of both the consideration paid and net assets acquired and any excess remaining after this reassessment is recognized immediately in net loss. Goodwill is initially recognized as an asset at cost and is subsequently measured at cost less any accumulated impairment losses.

If the initial accounting for a business acquisition is incomplete by the end of the reporting period in which the acquisition occurs, the Company will report provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period (see below), or additional assets or liabilities are recognized, to reflect new information obtained about facts and circumstances at the acquisition date that, if known, would have affected the amounts recognized at that date.

The measurement period is the period from the date of acquisition to the date the Company obtains complete information about facts and circumstances as of the acquisition date, to a maximum of one year.

S) Leases

A contract is a lease or contains a lease if it conveys the right to control the use of an asset for a period of time in exchange for consideration. To identify a lease, the Company (1) considers whether an explicit or implicit asset is specified in the contract and (2) determines whether the Company obtains substantially all the economic benefits from the use of the underlying asset by assessing numerous factors, including but not limited to substitution rights and the right to determine how and for what purpose the asset is used.

When assessing the lease term, management considers all facts and circumstances that create an economic incentive to exercise an extension option or to not exercise a termination option. This judgement is based on factors such as contract rates compared to market rates, economic reasons, significance of leasehold improvements, termination and relocation costs, installation of specialized assets, residual value guarantees, and any sublease term.

The Company does not recognize lease assets and lease liabilities for low-value assets or short-term leases with a term of 12 months or less. The lease payments are recognized in expenses over the lease term.

The lease liability is initially measured at the present value of the lease payments that are not paid. The Company elected to not separate non-lease components from lease components and to account for the non-lease and lease components as a single lease component.

The lease liability is discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Company's incremental borrowing rate. The Company estimates the incremental borrowing rate based on the lease term, collateral assumptions, and the economic environment in which the lease is denominated.

The lease liability is subsequently measured at amortized cost using the effective interest method. The lease liability is remeasured when the expected lease payments change as a result of new assessments of contractual options and residual value guarantees.

T) New accounting policies

There are no new standards issued but not yet effective as of January 1, 2022, that have a material impact to the Company's consolidated financial statements.

5. Trade and other receivables

Trade and other receivables consist of the following components as at December 31, 2021, and 2020:

		2021		2020
Trade receivables	**$**	**3,954**	$	3,760
Holdbacks		**1,044**		397
Other receivables		**20**		237
Expected Credit Loss		**(107)**		(65)
	$	**4,911**	$	4,329

Trade receivables and holdbacks are unsecured and non-interest bearing and are generally on 30-day terms subject to standard ten percent construction holdback on most sales over $100. Holdbacks are generally collectible forty-five days after completion of the work performed by the Company; however, holdbacks can be outstanding much longer if the holdback release is tied to the completion of the entire project by the general contractor. The Company is normally a subcontractor to the general contractor and only completes a portion of the total work to be completed by the general contractor and accordingly certain holdbacks can be outstanding for up to a year or more.

The aging of the trade receivables was as follows as at December 31, 2021, and 2020:

		2021		2020
1-30 days	**$**	**2,841**	$	1,749
31-60 days		**513**		443
61-90 days		**465**		608
Greater than 90 days		**135**		960
	$	**3,954**	$	3,760

In determining the recoverable amount of a trade, holdbacks and other receivables, the Company performs a risk analysis considering the type and age of the outstanding receivable and the credit worthiness of the counterparties. The Company considers trade accounts receivable past due if they are greater than 60 days, except for holdbacks that have been invoiced and are part of trade receivables but are not collectible until the completion of the entire project as discussed above. The expected credit loss calculated as at December 31, 2021, was $107 (2020 - $65).

6. Inventory

Inventory consists of the following components as at December 31, 2021, and 2020:

		2021		2020
Raw materials (principally foaming agent)	**$**	**718**	$	692
	$	**718**	$	692

Inventory expensed as part of cost of sales was $799 and $1,247 for the years ended December 31, 2021, and 2020, respectively.

7. Property and equipment

The movement in the net carrying amounts for each class of property and equipment for the years ending December 31, 2021, and 2020 is outlined below:

	Equipment and cellular material processor	Vehicles	Computer equipment and software	Furniture and fixtures	Subtotal owned	Right of Use Asset	Total
Cost							
At December 31, 2020	**15,621**	**838**	**202**	**138**	**16,799**	**2,869**	**19,668**
Additions	**635**	**394**	**3**	**47**	**1,079**	**240**	**1,319**
Dispositions	**(138)**	**(245)**	**(1)**	**(38)**	**(422)**	**(257)**	**(679)**
Exchange difference	**(45)**	**(4)**	**-**	**-**	**(49)**	**(7)**	**(56)**
At December 31, 2021	**16,073**	**983**	**204**	**147**	**17,407**	**2,845**	**20,252**
Accumulated depreciation							
At December 31, 2020	**(5,141)**	**(319)**	**(149)**	**(63)**	**(5,672)**	**(852)**	**(6,524)**
Depreciation	**(1,049)**	**(152)**	**(16)**	**(12)**	**(1,229)**	**(539)**	**(1,768)**
Dispositions	**2**	**29**	**-**	**1**	**32**	**184**	**216**
Exchange difference	**(5)**	**1**	**-**	**-**	**(4)**	**(1)**	**(5)**
At December 31, 2021	**(6,193)**	**(441)**	**(165)**	**(74)**	**(6,873)**	**(1,208)**	**(8,081)**
Net book value							
At December 31, 2021	**9,880**	**542**	**39**	**73**	**10,534**	**1,637**	**12,171**

	Equipment and cellular material processor	Vehicles	Computer equipment and software	Furniture and fixtures	Subtotal owned	Right of Use Asset	Total
Cost							
At December 31, 2019	15,746	925	189	129	16,989	2,319	19,308
Additions	98	-	14	10	122	632	754
Dispositions	(23)	(73)	-	-	(96)	(45)	(141)
Exchange difference	(200)	(14)	(1)	(1)	(216)	(37)	(253)
At December 31, 2020	15,621	838	202	138	16,799	2,869	19,668
Accumulated depreciation							
At December 31, 2019	(3,978)	(321)	(126)	(52)	(4,477)	(366)	(4,843)
Depreciation	(1,236)	(69)	(24)	(11)	(1,340)	(540)	(1,880)
Dispositions	1	66	-	-	67	35	102
Exchange difference	72	5	1	-	78	19	97
At December 31, 2020	(5,141)	(319)	(149)	(27)	(5,672)	(852)	(6,524)
Net book value							
At December 31, 2020	10,480	519	53	111	11,127	2,017	13,144

8. Goodwill and intangible assets

Goodwill and intangibles consist of the following components as at December 31, 2021, and 2020:

	Indefinite lives intangible assets	Product testing costs	Sales backlog	Goodwill	Total
Cost					
At December 31, 2020	**465**	**302**	**2,267**	**5,779**	**8,813**
Additions	**-**	**1**	**-**	**-**	**1**
Exchange difference	**-**	**-**	**(7)**	**(25)**	**(32)**
At December 31, 2021	**465**	**303**	**2,260**	**5,754**	**8,782**
Accumulated amortization					
At December 31, 2020	**-**	**-**	**(1,539)**	**-**	**(1,539)**
Amortization	**-**	**-**	**(718)**	**-**	**(718)**
Impairment	**(465)**	**(303)**	**-**	**-**	**(768)**
Exchange difference	**-**	**-**	**(3)**	**-**	**(3)**
At December 31, 2021	**(465)**	**(303)**	**(2,260)**	**-**	**(3,028)**
Net book value					
At December 31, 2021	**-**	**-**	**-**	**5,754**	**5,754**

	Indefinite lives intangible assets	Product testing costs	Sales backlog	Goodwill	Total
Cost					
At December 31, 2019	465	299	2,313	5,895	8,972
Additions	-	3	-	-	3
Exchange difference	-	-	(46)	(116)	(162)
At December 31, 2020	465	302	2,267	5,779	8,813
Accumulated amortization					
At December 31, 2019	-	-	(826)	-	(826)
Amortization	-	-	(769)	-	(769)
Exchange difference	-	-	56	-	56
At December 31, 2020	-	-	(1,539)	-	(1,539)
Net book value					
At December 31, 2020	465	302	728	5,779	7,274

Indefinite Life Intangible Assets

The intangible assets with indefinite lives include foaming agent technology, process licenses and trademarks. The foaming agent technology relates to the cost of obtaining a foaming agent formula which is used in the production of cellular concrete. The process licenses relate to the cost of obtaining a mechanical process patent which the Company believes could enhance the production of its cellular concrete although the Company has not pursued this opportunity to date. The process is protected by the patent which is registered in the U.S. The trademarks relate to cost of registering certain trademarks in both Canada and the U.S. These trademarks are renewed as required for a nominal cost. Due to the age of the assets and lack of commercial progress with respect to the assets, Management assessed all of the indefinite life intangible assets as impaired at the end of 2021 and as a result recognized an impairment of $465 (2020 $nil).

Product Testing Costs

Product testing costs relate to third party testing and verification of certain qualities of the Company's products. Management assessed the value of the product testing costs and determined that the fair value was indeterminable and the value in use was nil. As a result, Management recognized an impairment of the Product Testing costs of $303 (2020 $nil).

Sales Backlog and Goodwill

The sales backlog and goodwill were the result of the acquisition of MOS and PIGCO. The sales backlog acquired by the Company in the MOS acquisition is fully amortized, while the backlog acquired in the PIGCO acquisition is being amortized over 27 months on a straight-line basis, which is consistent with the time period the Company expects to complete the contracts. Goodwill arises principally from the ability to leverage the larger base of operations, the assembled workforce, future growth and the potential to realize synergies in the form of cost savings.

Goodwill

For the purposes of impairment testing goodwill has been allocated to the Cematrix USA CGU. The recoverable amounts have been determined based on a Value In Use ("VIU") calculation using cash flow projections from financial forecasts approved by senior management covering a five-year discounted future cash flow model plus a terminal value. There is a significant amount of uncertainty with respect to estimating the recoverable amount given the necessity of making key economic projections related to the following key assumptions: future cash flows, industry growth opportunities, including general economic risk assumptions, gross margins, terminal value and discount rate.

The key assumptions used, by CGU, in the calculation of recoverable amounts are gross margin and the discount rates:

	Cematrix USA		**Cematrix Canada**	
	2021	2020	**2021**	2020
Gross Margin	**27%**	28%	**30%**	26%
Pre-tax discount rate	**11%**	18%	**11%**	18%

Near term (1 year) sales growth assumptions (42%) are based on contracted and verbally awarded projects (including backlogs), as well as probability adjusted forecasts (range of 10% to 90%) for projects on which the Company has placed or will place bids, where the probabilities applied are based on management's assessment of a particular project based on historical experience and the stage that the project is in the sales cycle. Management has also considered its relationships with customers, the competitive landscape and changes in its business strategy. With regard to gross margins, consideration is given to historical operating margins in the end markets where prospective work opportunities are most significant and changes in the Company's business. A 2% change in gross margin in isolation would not result in an impairment charge.

The terminal value was calculated using a discount rate of 11% and annual growth of 2.0% in the terminal year.

Pre-tax discount rates used reflect management's assessment of the risks of the CGU or group of CGU's and its past experience in raising capital. The Company's pre-tax discount rate has been applied based on the WACC and reflects the current market assessments of the time value of money and the risks specific to the CGU. Furthermore, suitable sensitivity tests are also applied in conjunction with cash flow forecasts for the CGU in question. A change in the absolute discount rate of 2% in isolation would not result in an impairment charge.

There was no impairment recorded as at December 31, 2021 and 2020.

9. Bank operating loan and restricted cash

CEMATRIX's wholly owned subsidiary, CEMATRIX (Canada) Inc. has entered into a financing arrangement with the Canadian Western Bank (the "Bank") which provides a $1,500 demand operating loan (the "Loan"). The Loan bears interest at an amount equal to 2% above the Bank's prime lending rate, which is currently at 2.45% and is secured by a general security agreement providing a first secured interest on the receivables and inventory of CEMATRIX (Canada) Inc. The Loan is further guaranteed by the Company with a general security agreement providing a first secured interest on all present and after acquired property of the Company.

Under the Loan, the Bank will advance up to $1,500 based on 75% of trade receivables less than ninety days outstanding at the end of each month and 50% of inventories (up to a maximum $250). Based on these restrictions the actual Loan availability on December 31, 2021, was $1,496 of which $nil was outstanding ($129 – December 31, 2020).

The Loan contains covenants for consolidated cash flow coverage ratio, consolidated debt to tangible net worth ratio, and consolidated current ratio. Up until December 31, 2020, consolidated cash flow coverage ratio was tested annually, with the remaining covenants being tested on a monthly basis; however, as of the first quarter of 2021, consolidated cash flow coverage ratio is now being tested quarterly. At December 31, 2021, Cematrix (Canada) Inc. was in compliance with the consolidated debt to tangible net worth and current ratio covenants; however, it was in breach of cash flow coverage ratio.

In December 2020, the Company entered into an agreement with the Bank; whereby the Bank provided a letter of credit up to a maximum amount of $206 to be used as security for a certain project. As a result, the Company was required to place this amount as a pledged bank balance, essentially, restricting the use of this cash amount until the project is completed.

10. US Operating loans

US Operating loans consist of the following components as at December 31, 2021, and 2020:

		2021		2020
US operating loan, January 1	**$**	**-**	$	2,186
US operating loans assumed on business acquisitions		**-**		-
Proceeds of US operating loan		**-**		336
Repayment of US operating loans		**-**		(2,631)
Effect of unrealized foreign exchange loss (gain) on translation		**-**		109
US operating loan, December 31	**$**	**-**	$	-

Between May 2019 and February 2020, the Company obtained four short-term US operating loans with USA based banks and an unrelated party. Interest ranged between 0% and 14% per annum. The loans were fully repaid during 2020. There were no financial covenants in relation to the above operating loans.

11. Trade and other payables

Trade and other payables consist of the following components as at December 31, 2021, and 2020:

		2021		2020
Trade payables	**$**	**2,319**	$	1,160
Accrued interest		**18**		97
Other accruals		**690**		542
Payroll remittance and goods and services tax		**177**		634
	$	**3,204**	$	2,433

12. Long-term debt

Long-term debt consists of the following components as at December 31, 2021, and 2020:

	Maturity	**Interest rate**		**2021**		2020
BDC financing						
Loan 1	N/A	Floating	**$**	**-**	$	167
Loan 2	N/A	Floating		**-**		291
Loan 3	N/A	Floating		**-**		12
Loan 4	August 1, 2026	Floating		**1,236**		1,528
Loan 5	December 1, 2025	Floating		**2,367**		2,970
				3,603		4,968
Secured debenture	N/A	Fixed		**-**		1,000
				3,603		5,968
Less current portion				**(877)**		(1,059)
			$	**2,726**	$	4,909

Reconciliation of Long-term debt

The following table reconciles the changes in cash flows from financing activities for the Company's long-term debt:

		2021		2020
Long-term debt, January 1	**$**	**5,968**	$	7,281
Repayment of long-term debt		**(2,319)**		(1,229)
		3,649		6,052
Effect of unrealized foreign exchange gain on income		**(31)**		(31)
Effect of unrealized foreign exchange gain on translation		**(15)**		(53)
Long-term debt, December 31	**$**	**3,603**	$	5,968

Business Development Bank of Canada Financing ("BDC Financing"):

Loan 1 – In June 2016, the Company's wholly-owned subsidiary, CEMATRIX (Canada) Inc., entered into an agreement with the BDC for a working capital loan of $500. The loan was fully drawn down in December 2016. The interest, payable monthly, was set at 3.86% above the BDC floating base rate. The loan was fully repaid in the first quarter of 2021.

Loan 2 – In October 2016, the Company's wholly-owned subsidiary, CEMATRIX (Canada) Inc., entered into an agreement with the BDC for an equipment loan of $500. The loan was fully drawn down in April 2019. The interest, payable monthly, was set at 1.85% above the BDC floating base rate. The loan was fully repaid in the first quarter of 2021.

Loan 3 – In March 2017, the Company's wholly-owned subsidiary, CEMATRIX (Canada) Inc., entered into an agreement with the BDC for a loan of $100 to fund the first-year costs related to a program offered by the BDC that will assist the Company in establishing its growth strategy. The loan was fully drawn down in March 2017. The interest, payable monthly, was set at 1.00% above the BDC floating base rate. The loan was fully repaid in the first quarter of 2021.

Loan 4 – In May 2018 the Company entered into an agreement with the BDC for a loan of $1,800 USD to fund a portion of the purchase price of the MOS acquisition. The interest, which is currently 6.30% and is payable monthly, is set at 1.60% above the BDC floating USD base rate of 4.50%. The loan is repayable over eight years, with seasonal payments of principal required. Payments of principal of $38 USD were required from September to December 2018. Payments of principal of $38 USD are required from July to December for the years 2019 to 2025 and from July to August 2026. On May 31, 2018, the Canadian dollar equivalent of this loan was $2,333. On December 31, 2021, the Canadian dollar equivalent of this was $1,236. The difference being $1,097 which is due to principal repayments of $1,046 and unrealized foreign exchange gain of $51 being recognized in the statement of loss and comprehensive loss.

Loan 5 – In October 2019, the Company's wholly-owned subsidiary, CEMATRIX (USA) Inc. entered into an agreement with the BDC for a loan of $2,800 USD to fund the purchase price of the PIGCO acquisition. The interest, payable monthly, was initially set at 3.70% above the BDC floating USD base rate. Subsequently, in the first quarter of 2021, the interest rate was renegotiated to 1.60% above the BDC floating USD base rate and therefore, currently at 6.30%. The loan is repayable over six years, with seasonal payments of principal required. A principal repayment of $78 USD is required from July to December from years 2020 to 2025. On October 1, 2019, the Canadian dollar equivalent of this loan was $3,708. On December 31, 2021, the Canadian dollar equivalent of this was $2,366. The difference being $1,342, which is the combination of principal repayments of $1,184 and unrealized foreign exchange gain of $158 being recognized on the translation of foreign subsidiaries.

Loans 4 and 5 may be prepaid, on each anniversary date, up to 15% of the then outstanding principal amount but if not used the prepayment privilege for that anniversary date ceases. In addition to the annual privilege the Company may prepay all or part of the principal outstanding plus any interest owing up to the time of prepayment plus an indemnity equal to three months interest on the prepaid principal at the floating rate then applicable. The prepayment option is considered to be an embedded derivative with a fair value, which is nominal in nature as at December 31, 2021.

The BDC Financing loans are secured with a general security agreement providing a first security interest in the Company's current owned equipment and new equipment acquired pursuant to the BDC Financings and a security interest in all present and after acquired personal property of the Company subject only to lender charges on receivables and inventory in support of the Company's demand operating loan and future charges on specific equipment to a creditor for financing the purchase or lease thereof.

The BDC Financing Loan 4 and Loan 5 have a consolidated fixed charge coverage ratio financial covenant which is tested annually. At December 31, 2021, the Company was not in compliance with this covenant. On the same date, the BDC provided a tolerance for this covenant breach for the period up to and including December 31, 2021.

Secured Debenture:

In February 2014, the Company issued a secured debenture for $1,000 to an unrelated party. The interest, payable monthly was set at 9% per annum. The Company fully repaid the secured debenture during the first quarter of 2021.

13. Lease obligations

Lease obligations consist of the following components as at December 31, 2021, and 2020:

		2021		2020
Lease obligations, January 1	**$**	**2,065**	$	1,972
Additions		**239**		632
Lease payments (including interest)		**(765)**		(696)
Interest expense *(note 18)*		**154**		177
Foreign exchange		**(9)**		(20)
Lease obligations, December 31		**1,684**		2,065
Less current portion		**(578)**		(584)
Lease obligations - non-Current	**$**	**1,106**	$	1,481

The Company's lease obligations mainly relate to real property leases that are utilized within their operations. The Company has also entered into leases pertaining to various pieces of operating equipment including cars, trucks, trailers and computer equipment. Leases are entered into and terminated when they meet specific business requirements.

14. Earn-out liability

The earn-out will pay the Vendor 70% of the earnings before interest, income taxes, depreciation and amortization ("EBITDA") of MOS above $500 USD for the first 12 month period after May 31, 2018 and 65% of the EBITDA above $500 USD for the second and third 12 month periods after May 31, 2018. At a 27% discount rate, the earn-out liability, which is denominated in USD is measured at fair value through profit or loss ("FVTPL") and recalculated at every reporting period based upon management's estimate which considers economic conditions, customer demand for MOS's services and current borrowing rates available to the Company.

In addition, upon acquisition of PIGCO in October 2019, the Company has agreed to pay an annual earn-out payment to the Vendor for four years following the closing date of the acquisition. The earn-out payment is calculated on the operations of PIGCO annually and pay 65% of the EBITDA above $500 USD to the Vendor, ending September 30, 2023.

Earn-out liability consists of the following components as at December 31, 2021, and 2020:

		2021		2020
Earn-out liability, January 1	**$**	**2,128**	$	1,518
Revaluation in the year		**(132)**		(80)
Addition		**-**		468
Payments		**(2,047)**		-
Interest (*note 18)*		**29**		27
Accretion expense (*note 18)*		**53**		265
Foreign exchange difference		**(31)**		(70)
Earn-out liability, December 31		**-**		2,128
Less current portion		**-**		(2,128)
Earn-out liability, non-Current	**$**	**-**	$	-

In the first quarter of 2021, the company paid out Tranche 1 and 2 associated with the MOS acquisition and Tranche 1 associated with PIGCO acquisition. In the third quarter of 2021, the company paid out the last tranche associated with MOS acquisition. The Tranche 2 period in relation with the PIGCO acquisition was completed in the third quarter of 2021 and the EBITDA in PIGCO did not meet the threshold criteria as explained above resulting in no earnout expense for Tranche 2.

15. Convertible debt

(a) In conjunction with the acquisition of MOS on May 31, 2018, a $2,500 USD convertible note was issued to the Vendor. The convertible note bore interest at a rate of 8% per year, payable quarterly, for a period of three years. During the second quarter of 2021, the convertible note was converted into 13,373,684 CEMATRIX common shares.

The convertible note was trifurcated into a conversion feature, prepayment feature and host debt contract. The conversion feature was an embedded derivative as the convertible note violated the fixed for fixed criterion since the convertible note was denominated in a currency other than the Company's functional currency. The prepayment feature was an embedded derivative as its value was not closely related with the value of the host debt contract. The conversion feature and prepayment feature were measured at FVTPL. Changes in the fair value of the conversion and prepayment feature were recognized in profit or loss. The host debt contract was initially measured at its fair value and subsequently measured at amortized cost over the term to maturity using an effective interest rate of 11.2%.

The fair value of the conversion feature was determined using a Black-Scholes option pricing model. The fair value of the prepayment feature was determined using a modified Black-Scholes option pricing model that incorporated the prepayment penalty and referred to as the Barrier option pricing model.

The following assumptions were used at the time of conversion and at December 31, 2020:

	2020
Estimated fair value per common share	$0.48
Common share price	$0.72
Risk-free interest rate	0.20%
Expected life	0.41 years
Expected volatility in stock price	63.7%
Prepayment penalty	5% - 10%

Convertible note consists of the following components as at December 31, 2021, and 2020:

	Host Debt Contract	**Derivative Features**	**Total**
At December 31, 2019	3,110	62	3,172
Interest expense (*note 18)*	268	-	268
Accretion expense (*note 18)*	98	-	98
Interest payment	(268)	-	(268)
Unrealized foreign exchange gain	(66)	-	(66)
Fair value adjustment loss (gain)	-	6,336	6,336
At December 31, 2020	3,142	6,398	9,540
Interest expense (*note 18)*	**104**	-	**104**
Accretion expense (*note 18)*	**41**	-	**41**
Interest payment	**(104)**	-	**(104)**
Unrealized foreign exchange gain	**(165)**	-	**(165)**
Fair value adjustment gain	**-**	**(2,754)**	**(2,754)**
Conversion to shares	**(3,018)**	**(3,644)**	**(6,662)**
At December 31, 2021	**-**	**-**	**-**

(b) On April 22, 2020, the Company issued unsecured convertible debenture with a total principal amount of $5,720 at a price of $1,000 per debenture. The convertible debenture bears interest at a rate of 8% per year, payable semi-annually, till its maturity date of April 22, 2023. At the option of the holder, each debenture is convertible into 2,500 units of the Company at a conversion price of $0.40 per unit, prior to the maturity date. Each unit consists of one common share of the Company and one-half of a share purchase warrant. Each share purchase warrant entitles the holder to purchase one common share of the Company at an exercise price of $0.45 for a period of 36 months, following the date of its issuance. The Company may force the conversion of outstanding debentures, upon 30 days written notice, after a period of 12 months, in the event the Company's common share price exceeds $0.80 per share for the preceding twenty consecutive trading days.

The convertible debentures are compound financial instruments, trifurcated into a forced conversion feature, host debt contract and equity feature. The forced conversion feature is an embedded derivative as its value is not closely related with the value of the host debt contract.

The forced conversion feature is measured at fair value, with changes being recognized in profit or loss. The fair value of the forced conversion feature was determined using a modified Black-Scholes valuation model. The host debt contract was initially measured at its fair value and subsequently measured at amortized cost over the term to maturity, using an effective interest rate of 20.61%.

The equity feature is comprised of a base conversion feature and brokers warrants. The base conversion feature is valued on a residual basis after accounting for the host debt and forced conversion features and represents the 14,300,000 units that are issuable on the conversion of $5,720 convertible debentures. The broker warrants are valued on a fair value basis and represents the 1,100,000 units that were issued on close and included in the transaction costs allocated to the various components. The fair value of the brokers' warrants was also determined using a modified Black-Scholes valuation model with the following assumptions: expected dividend yield of 0%, expected volatility of 65.0%, which is based on historical volatility, risk free interest rate of 0.39% and an expected maturity of 3 years.

Transaction costs of $639 in cash, $220 in additional debentures and 1,100,000 brokers' warrants valued at $300 were incurred on the issuance and have been allocated pro rata to the various components, based on actual allocation of proceeds upon initial recognition. The transaction costs allocated to forced conversion feature was expensed in profit or loss, while the transaction costs allocated to host debt and equity feature were recorded against their respective components. The $220 transaction cost in additional debentures was included with the principal offering for a total consideration of $5,720. The additional debentures have a price of $1,000 per debenture and convertible into units in the same manner as mentioned above for principal offering. The brokers' warrants entitle the holder to acquire one unit of the Company at a conversion price of $0.40 per unit at any time before three years, following the date of this transaction. Each unit consists of one common share and one-half of a share purchase warrant with the same exercise price and expiry term for warrants as mentioned above for principal offering.

At December 31, 2021, and 2020, the following assumptions were used for forced conversion feature:

	2021	2020
Estimated fair value per common share	**$0.0075**	$0.026
Common share price	**$0.33**	$0.72
Risk-free interest rate	**0.95%**	0.24%
Expected life	**1.3 years**	2.3 years
Expected volatility in stock price	**70.4%**	65.0%

Convertible debenture consists of the following components as at December 31, 2021, and 2020:

	Host Debt Contract	Forced Conversion	Equity Feature	Total
At issuance	5,108	(126)	738	5,720
Transaction costs allocated	(1,035)	25	(149)	(1,159)
Interest expense (*note 18)*	309	-	-	309
Accretion expense (*note 18)*	251	-	-	251
Broker warrants units	-	-	300	300
Transaction costs expensed	-	(25)	-	(25)
Deferred tax on equity feature	-	-	(136)	(136)
Conversion – shares & warrants (net of tax)	(602)	19	(67)	(650)
Interest payment	(244)	-	-	(244)
Exercise of broker warrants	-	-	(30)	(30)
Fair value adjustment gain	-	(207)	-	(207)
At December 31, 2020	3,787	(314)	656	4,129
Interest expense (*note 18)*	**301**	**-**	**-**	**301**
Accretion expense (*note 18)*	**252**	**-**	**-**	**252**
Conversion – shares & warrants (net of tax)	**(919)**	**28**	**(101)**	**(992)**
Interest payment	**(314)**	**-**	**-**	**(314)**
Exercise of broker warrants	**-**	**-**	**(23)**	**(23)**
Fair value adjustment loss	**-**	**259**	**-**	**259**
At December 31, 2021	**3,107**	**(27)**	**532**	**3,612**

Net proceeds of $4,836 were received on the issuance of convertible debenture, which was equal to the gross amount of $5,720 less: 1) cash transaction costs of $639, which were allocated to all the components of the convertible debenture; 2) additional convertible debentures of $220, which were included in the gross amount of the offering, for which no cash was received and considered as part of the transaction costs and; 3) cash transaction costs of $25 which were expensed immediately to profit or loss.

The following table summarizes the changes in convertible debenture and broker warrants units of the Company as at December 31, 2021, and 2020:

	Number Of Convertible Debenture Units	Amount	Number Of Broker Warrants Units	Amount
At issuance	14,300,000	$ 5,720	1,100,000	$ 300
Conversion – shares & warrants	(2,112,500)	(845)	(108,750)	(30)
At December 31, 2020	12,187,500	4,875	991,250	270
Conversion – shares & warrants	**(3,215,000)**	**(1,286)**	**(82,950)**	**(23)**
At December 30, 2021	**8,972,500**	**3,589**	**908,300**	**247**

Each unit can be converted into one common share of the Company and one-half of a share purchase warrant.

16. Share capital

(a) Authorized

Unlimited number of no par value voting common shares
Preferred shares – to be issued in series as authorized by the Board of Directors

(b) Issued

The following table summarizes the changes in the issued common shares of the Company for the years ended December 31, 2021, and 2020:

	2021			2020		
	Number of Shares		**Amount ($000's)**	Number of Shares		Amount ($000's)
Common shares, beginning of year	**66,776,750**	**$**	**13,802**	59,286,019	$	10,953
Common shares issued (i), (ii),	**30,363,204**		**11,445**	7,490,731		2,208
Public offering, net of costs (iii)	**36,799,984**		**20,890**	-		-
Reclassification of options	**-**		**634**	-		37
Reclassification of broker warrants	**-**		**14**	-		19
Reclassification of warrants – public offering (iii)	**-**		**(5,666)**	-		-
Reclassification of warrants	**-**		**1,284**	-		585
Common shares, end of the period	**133,939,938**	**$**	**42,403**	66,776,750	$	13,802

i. In 2020, for gross proceeds of $557 and $1,125 received, the Company issued 1,856,304 and 3,213,177 common shares at a price of $0.30 and $0.35, respectively on the exercise of warrants.

   The Company issued 2,112,500 common shares upon the exercise of convertible debenture. The principal amount of $845 was converted and allocated to share capital and contributed surplus (net of transaction costs and tax) based on fair value assigned at the time of issuance. As a result, $443 and $227 was allocated to share capital and contributed surplus, respectively.

   For gross proceeds of $84 received, the Company issued 308,750 common shares on the exercise of employee stock options and broker warrants. The exercise price range was between $0.18 and $0.40.

ii. In 2021, for gross proceeds of $537 received, the company issued 2,309,999 common shares on the exercise of employee stock options. The exercise price range was between $0.20 and $0.30.

   In 2021, for gross proceeds of $3,610 received, the Company issued 11,464,521 common shares on the exercise of warrants and broker warrants. The exercise price range was between $0.24 and $0.30.

   In the second quarter of 2021, the convertible note issued in conjunction with the acquisition of MOS was converted into 13,373,684 common shares, with the convertible note liability balance of $6,662 allocated to share capital upon conversion.

   The Company issued 3,215,000 common shares upon the exercise of convertible debentures. The principal amount of $1,272 was converted and allocated to share capital and contributed surplus (net of transaction costs and tax) based on fair value assigned at the time of issuance. As a result, $636 and $334 was allocated to share capital and contributed surplus, respectively.

iii. On March 18, 2021, the Company completed a public offering through a short-form prospectus raising $23,000 in gross proceeds. The Offering was for 35,384,600 units at a price of $0.65 per unit of the Company. Additionally, the lead agents were paid a corporate finance fee satisfied by the issuance of 1,415,384 units for a total of 36,799,984 units. Each unit consists of one common share of the Company and one-half of one common share purchase warrant. Each warrant will be exercisable for one common share at a price of $0.81, for a period of 24 months following closing of the Offering. As a result, the total number of warrants that were issued as part of this financing were 18,399,992.

In addition, the Company issued 2,830,768 broker warrants of the Company to the agents equal to 8% of the number of units issued under the Offering. Each broker warrant entitles the holder to acquire one unit of the Company at $0.65 until March 18, 2023. The broker warrants and warrants mentioned above were valued at $5,666 in total, which was reclassified to contributed surplus. The fair value per share purchase warrant was determined using the assumptions mentioned in the warrants section below.

The Company paid the agents a cash commission equal to 7% of the gross proceeds of the Offering, amounting to $1,610 and incurred $500 in other transaction costs, resulting in net proceeds of $20,890.

(c) Share Purchase Warrants

The following table reflects the issuance of warrants for the years ended December 31, 2021, and 2020, which is recorded in contributed surplus:

	2021		2020	
	Number of Warrants	**Weighted average price**	Number of Warrants	Weighted average price
Warrants, January 1	**11,545,321**	**$0.310**	15,554,177	$0.310
Public offering	**18,399,992**	**$0.810**	-	-
Convertible debenture conversion	**1,607,500**	**$0.450**	1,056,250	$0.400
Broker warrants conversion	**41,475**	**$0.450**	54,375	$0.450
Warrants expired	**(145,000)**	**$0.300**	(50,000)	$0.300
Warrants exercised	**(11,381,571)**	**$0.314**	(5,069,481)	$0.332
Warrants, December 31	**20,067,717**	**$0.779**	11,545,321	$0.310

The fair value per share purchase warrant was determined using the following weighted average assumptions at the time of the issuance using the Black-Scholes option pricing model:

	August 14, 2019	**August 23, 2019**	**March 18, 2021**
Estimated fair value per share purchase warrant	**$0.10**	**$0.10**	**$0.27**
Common share price	**$0.20**	**$0.20**	**$0.63**
Exercise price	**$0.30**	**$0.30**	**$0.65**
Risk-free interest rate	**1.38%**	**1.38%**	**0.27%**
Expected life	**2 years**	**2 years**	**2 years**
Expected volatility in stock price	**111.0%**	**112.0%**	**81%**
Expected annual dividend yield	**nil**	**nil**	**nil**

The fair value of these warrants was determined at the time of the issuance of convertible debenture using a modified Black-Scholes valuation model with the following assumptions:

	Warrants issued upon conversion of convertible debt	**Warrants issued upon conversion of broker warrants**
Estimated fair value per share purchase warrant	**$0.21**	**$0.20**
Common share price	**$0.40**	**$0.40**
Exercise price	**$0.45**	**$0.45**
Risk-free interest rate	**0.39%**	**0.39%**
Expected life	**3 years**	**3 years**
Expected volatility in stock price	**65%**	**65%**
Expected annual dividend yield	**nil**	**nil**

(d) Broker Warrants Units

The following table reflects the issuance of broker warrants units for the years ended December 31, 2021, and 2020:

	2021		2020	
	Number of Units	**Weighted average price**	Number of Units	Weighted average price
Broker warrants, January 1	**991,250**	**$0.400**	1,100,000	$0.400
Public offering	**2,830,768**	**$0.650**	-	-
Broker warrants exercised	**(82,950)**	**$0.400**	(108,750)	$0.400
Broker warrants, December 31	**3,739,068**	**$0.589**	991,250	$0.400

17. Cost of sales

Cost of sales consists of the following components for the years ended December 31, 2021, and 2020:

		2021		2020
Manufacture of cellular concrete				
Materials	**$**	**10,409**	$	11,528
Direct labour		**4,414**		5,238
Variable expenses		**2,279**		2,515
Fixed overhead		**185**		163
Depreciation		**1,416**		1,502
	$	**18,703**	$	20,946

18. Finance costs

The finance costs incurred for the years ended December 31, 2021, and 2020 are as follows:

		2021		2020
Interest				
BDC financings *(note 12)*	**$**	**280**	$	486
Secured debenture *(note 12)*		**19**		98
Convertible debt *(note 15)*		**405**		577
Lease obligations *(note 13)*		**154**		177
Bank operating loan *(note 9)*		**1**		28
US operating loan *(note 10)*		**-**		113
Earn-out liability *(note 14)*		**29**		27
Other		**71**		44
	$	**959**	$	1,550

The accretion costs incurred for the years ended December 31, 2021, and 2020 are as follows:

		2021		2020
Accretion				
Earn-out liability *(note 14)*	**$**	**53**	$	265
Convertible debt *(note 15)*		**293**		348
	$	**346**	$	613

19. Other income (expenses)

Other income (expenses) for the years ended December 31, 2021, and 2020 consists of the following:

		2021		2020
Unrealized foreign exchange gain	**$**	**162**	$	97
Realized foreign exchange gain		**60**		(54)
Gain (loss) on sale of equipment		**-**		11
Government subsidies		**270**		781
Equipment rental		**95**		95
Earn-out expense *(note 14)*		**-**		(468)
Other		**(117)**		(6)
	$	**470**	$	456

During the year ended December 31, 2021, the Company received wage and rent subsidies of $270 (2020 - $781) as part of the various COVID-19 relief programs initiated by the Federal Government of Canada. The wage subsidy program included a claw-back feature based on certain factors. As a result, the Company has accrued an amount related to the claw-back and has been netted the accrual against subsidies received in the year.

20. Taxes

The provision for income tax differs from that which would be obtained by applying the statutory rates to income before tax. The components of the tax expense were as follows:

		2021		2020
Loss before taxes	**$**	**(2,700)**	$	(9,575)
Combined statutory tax rate		**23.0%**		24.0%
Computed "expected" tax recovery		**(621)**		(2,298)
Differences resulting from:				
Non-cash stock-based compensation		**63**		25
Change in enacted rate and other		**83**		(176)
Change in deferred tax assets not recognized		**(371)**		2,650
Income tax expense (recovery)	**$**	**(845)**	$	(201)

The statutory rate declined from 24% to 23.0% due to the full year effect of reductions in the Alberta corporate tax rate on January 1, 2020, and July 1, 2020.

The tax effects of deductible and taxable temporary differences that give rise to the Company's deferred tax assets and liabilities were as follows:

Deferred tax assets (liabilities)

Canada	**December 31, 2020**	**Charged to Equity**	**Deferred Tax Expense**	**Foreign exchange**	**December 31, 2021**
Non-capital losses	**702**	**-**	**(502)**	**-**	**200**
Finance lease obligations	**-**	**-**	**-**	**-**	**-**
Property and equipment	**(394)**	**-**	**194**	**-**	**(200)**
Convertible debt	**(124)**	**-**	**124**	**-**	**-**
Intangibles	**(184)**	**-**	**184**	**-**	**-**
Net deferred tax asset (liability)	**-**	**-**	**-**	**-**	**-**

U.S.	**December 31, 2020**	**Business Combination**	**Deferred Tax Recovery**	**Foreign exchange**	**December 31, 2021**
Property and equipment	**(2,522)**	**-**	**87**	**(50)**	**(2,485)**
Intangibles	**(191)**	**-**	**183**	**(2)**	**(9)**
Other	**604**	**-**	**(91)**	**9**	**523**
Net operating losses	-	**-**	**752**	**10**	**762**
Net deferred tax asset (liability)	**(2,109)**	**-**	**932**	**(32)**	**(1,210)**

Deferred tax assets (liabilities)

Canada	December 31, 2019	Charged to Equity	Deferred Tax Expense	Foreign exchange	December 31, 2020
Non-capital losses	1,049	-	(347)	-	702
Finance lease obligations	184	-	(184)	-	-
Property and equipment	(354)	-	(40)	-	(394)
Convertible debt	-	(115)	(9)	-	(124)
Intangibles	(183)	-	(1)	-	(184)
Other	236	-	(236)	-	-
Net deferred tax asset (liability)	933	(115)	(817)	-	-

U.S.	December 31, 2019	Business Combination	Deferred Tax Recovery	Foreign exchange	December 31, 2020
Property and equipment	(2,828)	-	248	58	(2,522)
Intangibles	(381)	-	190	-	(191)
Other	98	-	519	(13)	604
Net operating losses	114	-	(117)	3	-
Net deferred tax asset (liability)	(2,998)	-	840	48	(2,109)

Deferred taxes reflect the net effect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Deductible temporary differences are recognized to the extent that it is probable that taxable profit will be available against which the deductible temporary differences can be utilized. Management estimates future taxable income using forecasts based on the best available current information. Based on current estimates, there is currently insufficient evidence that deferred tax asset will be recovered; therefore, the Company has not recognized any deferred tax asset in relation to Canada in the current year. The deferred tax asset will only be recognized with improved certainty and quantification of taxable profits related to these assets.

Unrecognized Deductible Temporary Differences

	2021	2020
Canada		
Non-capital losses	**$ 7,437**	$ 4,471
Intangibles	**95**	95
Property, equipment and other	**5,534**	7,762
Net unrealized deductible temporary differences	**$ 13,066**	$ 12,328

The Company has not recognized a deferred tax asset in respect to $7,437 of non-capital losses in Canada. These losses expire between 2029 and 2041.

21. Loss per common share

The number of common shares included in the computation of basic and diluted loss per common share for the years ended December 31, 2021, and 2020, is as follows:

	2021	2020
Weighted average common shares outstanding - basic	**115,391,931**	62,051,858
Effect of dilutive instruments	-	-
	115,391,931	62,051,858

The dilutive securities for the years ended December 31, 2021, and 2020 have no dilutive effect as the Company incurred losses in these periods.

22. Non-cash stock-based compensation

Stock option grants

The Company has an Omnibus Equity Incentive Plan ("OEI Plan") for the issue of up to 10% of the issued and outstanding common shares of the Company. Stock options are part of the OEI Plan. All options that are outstanding will expire upon maturity, or earlier, if the optionee ceases to be a director, officer, employee or consultant or there is a merger, amalgamation or change in control of the Company. The purpose of the option grants is to reward and retain directors, management, and consultants important to the continued operation and growth of the Company.

The following table summarizes the changes in options for the years ended December 31, 2021, and 2020:

	2021		2020	
	Number of Options	**Weighted average price**	Number of Options	Weighted average price
Outstanding, beginning of year	**4,845,000**	**$0.266**	4,820,000	$0.230
Granted	**2,015,000**	**$0.455**	550,000	$0.555
Exercised	**(2,310,000)**	**$0.235**	(200,000)	$0.200
Forfeited	**(271,666)**	**$0.482**	(250,000)	$0.200
Expired	**(203,334)**	**$0.227**	(75,000)	$0.353
Outstanding, end of year	**4,075,000**	**$0.355**	4,845,000	$0.266
Exercisable, end of the year	**1,610,000**	**$0.355**	3,838,334	$0.232

The following table summarizes the stock options to acquire common shares outstanding as at December 31, 2021:

Range of exercise prices	Options Outstanding	Options Exercisable	Weighted average remaining life (years)	Weighted average exercise price – options outstanding	Weighted average exercise price – options exercisable
$0.19 - $0.22	760,000	660,000	1.95	$0.20	$0.20
$0.23 - $0.39	1,680,000	900,000	2.17	$0.13	$0.24
$0.40 - $0.59	1,635,000	50,000	3.39	$0.48	$0.43
$0.19 - $0.59	4,075,000	1,610,000	2.50	$0.35	$0.23

At the date of grant, the per share fair value of the options granted and other assumptions, using the Black-Scholes option pricing model are as follows:

	2021	2020
Estimated fair value per option	**$0.30 - $0.41**	$0.29 - $0.42
Weighted average common share price	**$0.38**	$0.56
Risk-free interest rate	**0.24% - 1.00%**	0.21% - 0.26%
Expected life	**5 years**	5 years
Expected volatility in stock price	**93% - 95%**	95%
Expected annual dividend yield	**nil**	nil
Estimated forfeiture rate	**nil**	nil

Restricted share unit grants

The Company has an Omnibus Equity Incentive Plan ("OEI Plan") for the issue of up to 10% of the issued and outstanding common shares of the Company. Restricted Share Units ("RSU's") are part of the OEI Plan. In the second quarter of 2021, the Company issued RSU's under the OEI plan. Subject to the specific provisions of the RSU plan, eligibility, vesting period, terms of the RSU's and the number of RSU's granted are to be determined by the Board of Directors at the time of the grant. The purpose of the RSU grants is to reward and retain directors, management, and consultants important to the continued operation and growth of the Company.

The following tables summarizes the changes in Company's outstanding RSU's:

	2021	**2020**
	Number of RSU's	Number of RSU's
Outstanding, beginning of period	**-**	-
Granted	**210,528**	-
Forfeited	**(26,316)**	-
Outstanding, end of year	**184,212**	-

The fair value of each RSU granted was determined by using the company's share price on the grant date. The estimated fair value of the RSU's granted is being recognized as an expense over the three years vesting period of the RSU's.

Non-Cash Stock Based Compensation

Non-cash stock-based compensation for the year ended December 31, 2021, of $274 (2020 - $103) was recognized in the consolidated statement of loss and comprehensive loss with an offsetting amount charged to contributed surplus. Non-cash stock-based compensation has no current period impact on the Company's cash position.

23. Change in non-cash working capital

The changes in non-cash working capital items - asset (increases) decreases and liability increases (decreases) - are outlined below for the years ended December 30, 2021, and 2020:

		2021		2020
Trade and other receivables	**$**	**(672)**	$	78
Inventory		**(28)**		(50)
Prepaid expenses and deposits		**(259)**		38
Trade and other payables		**868**		71
	$	**(90)**	$	137

24. Related party transactions

During the year ended December 31, 2021, the Company incurred legal fees from a firm which employs one of the directors of the Company in the amount of $7 (2020 - $1) of which $nil (2020 - $nil) is in trade and other payables as at December 31, 2021.

Compensation of key management personnel

The remuneration of directors and other members of key management personnel during the years ended December 31, 2021, and 2020 were as follows:

		2021		2020
Short term and post employment benefits	**$**	**1,321**	$	1,234
PIGCO Earnout and MOS acquisition related bonuses		**262**		466
Non-cash stock-based compensation		**140**		40
	$	**1,723**	$	1,740

25. Financial instruments and risk management

Set out below is a comparison, by category, of the carrying amounts and fair values of all of the Company's financial instruments that are carried in the consolidated financial statements and how the fair value of financial instruments are measured.

Fair values

Non-derivative financial instruments

The fair values of cash and cash equivalents, restricted cash, trade and other receivables and trade and other payables approximate their carrying values due to the relatively short periods to maturity of these instruments.

The fair value of the BDC Financing loans approximate its carrying value as the debt rate floats with prime and is representative of market rates offered to the Company.

At the date of issue, the fair value of the debt components of the convertible debt was estimated using the prevailing market interest rates for similar non-convertible instruments. This amount was recorded as a liability on an amortized cost basis using the effective interest method until extinguished upon conversion or at the instrument's maturity date. The fair value of the equity feature of the convertible debt was determined at issue date by deducting the amount of the liability component from the fair value of the compound instrument as a whole. This conversion option is recognized net of income tax effects as equity and is not subsequently re-measured.

Fair value represents the price at which a financial instrument could be exchanged in an orderly market, in an arm's length transaction between knowledgeable and willing parties who are under no compulsion to act. The Company classifies the fair value of the financial instruments according to the following hierarchy based on the number of observable inputs used to value the instrument.

Level 1 – Quoted prices are available in active markets for identical assets or liabilities as of the reporting date. Active markets are those in which transactions occur in sufficient frequency and volume to provide pricing information on an ongoing basis.

Level 2 – Pricing inputs are other than quoted prices in active markets included in level 1. Prices in level 2 are either directly or indirectly observable as of the reporting date. Level 2 valuations are based on inputs, including quoted forward prices for commodities, time value and volatility factors, which can be substantially observed or corroborated in the marketplace. The embedded derivatives related to the forced conversion, prepayment and conversion features on the convertible debt are measured based on level 2 (note 15).

Level 3 – Valuations in this level are those with inputs for the assets or liabilities that are not based on observable market date. The earn-out liability is measured at level 3 (note 14).

There were no transfers between level 1, 2 and 3 inputs during the year.

Risk management

The Company's activities are exposed to a variety of financial risks: interest rate risk, credit risk, liquidity risk and foreign exchange risk. The Company's overall risk management program focuses on the unpredictability of financial and economic markets and seeks to minimize potential adverse effects on the Company's financial performance. Risk management is carried out by financial management in conjunction with overall Company governance.

(a) Interest Rate Risk
The BDC Financings, which totalled $3,602 on December 31, 2021, are subject to floating market rates. Based on the floating rate debt outstanding, a 1% increase/decrease in interest rates would result in an increase/decrease in net loss attributable to common shareholders of approximately $27.

(b) Credit Risk
The Company is responsible for reviewing the credit risk for each customer before standard payment and delivery terms and conditions are offered. The Company review consists of external ratings, when available, and in some cases bank and trade references. Management has established a credit policy under which new customers are analyzed for creditworthiness before the Company extends credit. The Company monitors its trade and other receivables aging on an ongoing basis as part of its process in managing its credit risk.

The Company also manages credit risk related to trade and other receivables on a consolidated basis whereby the aggregate exposure to individual customers is reviewed and their credit quality is assessed.

Financial instruments that subject the Company to credit risk consist primarily of cash and cash equivalents, restricted cash and trade receivables. The Company's cash and cash equivalents is held with large established financial institutions. The Company manages credit risk using credit approval and monitoring practices. Management is not materially concerned about the credit quality and collectability of accounts receivables, as our customers are predominantly large in scale and of high creditworthiness, and the concentration of credit risk is limited as our largest customers change year to year depending on which projects are being completed. At December 31, 2021, the Company had $19,945 of cash and cash equivalents (2020 - $2,475) and $286 in restricted cash (2020 - $286).

(c) Liquidity Risk
Liquidity risk is the risk that the Company will not be able to meet its financial obligations. Liquidity risk management involves maintaining sufficient cash and cash equivalents and the availability of working capital financing to meet its financial obligations.

The table below summarizes the maturity profile of the Company's financial liabilities at December 31, 2021, and 2020 based on contractual undiscounted payments:

	Less than 1 year	1 to 2 years	2 to 6 years	Total
As at December 30, 2021				
Trade and other payables	**$ 3,204**	**$ -**	**$ -**	**$ 3,204**
Long-term debt	**877**	**877**	**1,849**	**3,603**
Lease obligations	**578**	**932**	**174**	**1,684**
Convertible debt	**-**	**3,107**	**-**	**3,107**
	$ 4,659	**$ 4,916**	**$ 2,023**	**$ 11,598**
As at December 31, 2020				
Bank operating loan	$ 129	$ -	$ -	$ 129
Trade and other payables	2,433	-	-	2,433
Long-term debt	1,059	2,411	2,498	5,968
Lease obligations	740	1,177	477	2,394
Earn-out liability	2,128	-	-	2,128
Convertible debt	3,183	-	4,875	8,058
	$ 9,672	$ 3,588	$ 7,850	$ 21,110

(d) Foreign Exchange Risk
Foreign exchange risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The Company's exposure relates to balances denominated in USD and the operations of its U.S. subsidiary which are predominantly in USD. The Company does not hedge these items as the timing of related transactions is not certain. However, the management manages and mitigates foreign exchange risk by monitoring exchange rate trends and forecasted economic conditions.

As at December 31, 2021, and 2020 the following balances are denominated in USD:

		2021		2020
Cash and cash equivalents	**$**	**945**	$	924
Trade and other receivables	**$**	**2,594**	$	2,219
Prepaid expenses and deposits	**$**	**243**	$	97
Trade and other payables	**$**	**1,825**	$	997
Long term debt	**$**	**2,366**	$	3,533
Lease obligations	**$**	**1,109**	$	1,024
Earn-out liability	**$**	**-**	$	1,671
Convertible debt – host debt and derivative liability	**$**	**-**	$	7,493

The Company's primary foreign exchange sensitivity is in relation to movements of the USD against the Canadian dollar. Based on USD balances as at December 31, 2021, a 1% increase/decrease of the USD against the Canadian dollar would result in an increase/decrease in net loss of approximately $15.

26. Capital management

Management defines capital as the Company's total shareholders' equity, its debt and finance lease obligations. The Company manages its capital structure and adjusts it in response to changes in economic conditions and the risk characteristics of its underlying assets. The Board of Directors does not establish a quantitative return on capital for management, but rather promotes year over year sustainable profitable growth. In addition, the Board of Directors has established policies to monitor the Company's performance against its operating and capital budgets and forecasts.

The Company's current objective when managing capital is to increase the Company's capital through growth in earnings and to re-invest the earnings generated to facilitate the continued growth in the Company, in order to provide an appropriate rate of return to shareholders.

Management reviews its capital management approach on an ongoing basis. There were no material changes to this approach during the year ended December 31, 2021. The Company is subject to externally imposed financial covenants with its bank operating loan and long-term debt loans 4 and 5.

The total capitalization as at December 31, 2021, and 2020 is outlined below:

		2021		2020
Bank operating loan (*note 9*)	**$**	**-**	$	129
Long term debt *(note 12)*		**3,603**		5,968
Lease obligations *(note 13)*		**1,684**		2,065
Convertible debt – host debt and derivative liability *(note 15)*		**3,107**		13,327
Total debt		**8,394**		21,489
Shareholders' equity		**31,581**		679
	$	**39,975**	$	22,168

27. Geographical segmented information

The Company has one operating segment, and its primary business is the supply and placement of cellular concrete. It currently markets its services in Canada and the U.S. The tables below, present the sales to external customers for the years ended December 31, 2021, and 2020 and the total non-current assets attributable to the Company's geographical segments as at December 31, 2021, and 2020:

		2021		2020
Sales to external customers				
Canada	**$**	**9,493**	$	5,135
U.S.		**13,108**		21,429
	$	**22,601**	$	26,564

		2021		2020
Total non-current assets				
Canada	**$**	**2,909**	$	4,280
U.S.		**15,044**		16,452
	$	**17,953**	$	20,732

28. Subsequent Events

On February 7, 2022, the Company completed a new $5M revolving asset-based lending ("ABL") credit facility with CIBC, a leading Canadian financial institution. There were no borrowings on the new credit facility as of that date. The existing $1.5 million CWB credit facility was cancelled at the same time.

On February 15, 2022, the Company announced that it had entered into a Letter Agreement with Glavel Inc. ("Glavel") that will provide up to a USD $4 million phased strategic investment in Glavel (the "Investment"). Glavel is based in the USA. Glavel manufactures and sells foamed glass, which is an ultra light weight fill material. The investment will be made in phases with the first phase being a $560 USD investment in convertible preferred shares. With the first investment, CEMATRIX will own roughly 9.4% of Glavel on a fully diluted basis.