

Q2 2019  
for the period ended September 30, 2018



## To Our Shareholders

Computer Modelling Group Ltd. announces its second quarter results for the three and six months ended September 30, 2018.

### Second Quarter Highlights

Three months ended September 30, (\$ thousands, except per share data)	2018	2017 <sup>(1)</sup>	\$ change	% change
Annuity/maintenance software licenses	15,111	16,341	(1,230)	-8%
Perpetual software licenses	1,172	290	882	304%
Total revenue	17,941	17,981	(40)	0%
Operating profit	7,024	6,615	409	6%
Net income	5,056	4,606	450	10%
Earnings per share - basic	0.06	0.06	-	0%
Funds flow from operations per share - basic <sup>(2)</sup>	0.07	0.07	-	0%

Six months ended September 30, (\$ thousands, except per share data)	2018	2017 <sup>(1)</sup>	\$ change	% change
Annuity/maintenance software licenses	29,826	32,857	(3,031)	-9%
Perpetual software licenses	1,498	1,368	130	10%
Total revenue	34,646	36,967	(2,321)	-6%
Operating profit	12,398	13,593	(1,195)	-9%
Net income	9,314	9,563	(249)	-3%
Earnings per share - basic	0.12	0.12	-	0%
Funds flow from operations per share - basic <sup>(2)</sup>	0.14	0.15	(0.01)	-7%

- (1) On April 1, 2018, the Company adopted IFRS 15 *Revenue from Contracts with Customers* using the cumulative effect method, by recognizing the cumulative effect of initially applying IFRS 15 as an adjustment to the opening balance of equity at April 1, 2018. Accordingly, comparative information is not restated and continues to be reported under the previous standard.
- (2) Funds flow from operations is a non-IFRS financial measure that represents net income adjusted for depreciation expense, non-cash stock-based compensation expense, deferred tax expense (recovery) and deferred rent. See "Non-IFRS Financial Measures".

# Management's Discussion and Analysis

*This Management's Discussion and Analysis ("MD&A") for Computer Modelling Group Ltd. ("CMG", the "Company", "we" or "our"), presented as at November 13, 2018, should be read in conjunction with the unaudited condensed consolidated interim financial statements and related notes of the Company for the three and six months ended September 30, 2018 and 2017. Additional information relating to CMG, including our Annual Information Form, can be found at [www.sedar.com](http://www.sedar.com). The financial data contained herein have been prepared in accordance with International Financial Reporting Standards ("IFRS") and, unless otherwise indicated, all amounts in this report are expressed in Canadian dollars.*

## Forward-looking Information

Certain information included in this MD&A is forward-looking. Forward-looking information includes statements that are not statements of historical fact and which address activities, events or developments that the Company expects or anticipates will or may occur in the future, including such things as investment objectives and strategy, the development plans and status of the Company's software development projects, the Company's intentions, results of operations, levels of activity, future capital and other expenditures (including the amount, nature and sources of funding thereof), business prospects and opportunities, research and development timetable, and future growth and performance. When used in this MD&A, statements to the effect that the Company or its management "believes", "expects", "expected", "plans", "may", "will", "projects", "anticipates", "estimates", "would", "could", "should", "endeavours", "seeks", "predicts" or "intends" or similar statements, including "potential", "opportunity", "target" or other variations thereof that are not statements of historical fact should be construed as forward-looking information. These statements reflect management's current beliefs with respect to future events and are based on information currently available to management of the Company. The Company believes that the expectations reflected in such forward-looking information are reasonable, but no assurance can be given that these expectations will prove to be correct and such forward-looking information should not be unduly relied upon.

With respect to forward-looking information contained in this MD&A, we have made assumptions regarding, among other things:

- Future software license sales
- The continued financing by and participation of the Company's CoFlow partner and it being completed in a timely manner
- Ability to enter into additional software license agreements
- Ability to continue current research and new product development
- Ability to recruit and retain qualified staff

Forward-looking information is not a guarantee of future performance and involves a number of risks and uncertainties, only some of which are described herein. Many factors could cause the Company's actual results, performance or achievements, or future events or developments to differ materially from those expressed or implied by the forward-looking information including, without limitation, the following factors, which are discussed in greater detail in the "Business Risks" section of CMG's MD&A for the year ended March 31, 2018:

- Economic conditions in the oil and gas industry
- Reliance on key customers
- Foreign exchange
- Economic and political risks in countries where the Company currently does or proposes to do business
- Increased competition
- Reliance on employees with specialized skills or knowledge
- Protection of proprietary rights

Should one or more of these risks or uncertainties materialize, or should assumptions underlying the forward-looking statements prove incorrect, actual results, performance or achievement may vary materially from those expressed or implied by the forward-looking information contained in this MD&A. These factors should be carefully considered and readers are cautioned not to place undue reliance on forward-looking information, which speaks only as of the date of this MD&A. All subsequent forward-looking information attributable to the Company herein is expressly qualified in its entirety by the cautionary statements contained in or referred to herein. The Company does not undertake any obligation to release publicly

any revisions to forward-looking information contained in this MD&A to reflect events or circumstances that occur after the date of this MD&A or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

## Non-IFRS Financial Measures

This MD&A includes certain measures which have not been prepared in accordance with IFRS such as “EBITDA”, “direct employee costs” and “other corporate costs.” Since these measures do not have a standard meaning prescribed by IFRS, they are unlikely to be comparable to similar measures presented by other issuers. Management believes that these indicators nevertheless provide useful measures in evaluating the Company’s performance.

“Direct employee costs” include salaries, bonuses, stock-based compensation, benefits, commission expenses, and professional development. “Other corporate costs” include facility-related expenses, corporate reporting, professional services, marketing and promotion, computer expenses, travel, and other office-related expenses. Direct employee costs and other corporate costs should not be considered an alternative to total operating expenses as determined in accordance with IFRS. People-related costs represent the Company’s largest area of expenditure; hence, management considers highlighting separately corporate and people-related costs to be important in evaluating the quantitative impact of cost management of these two major expenditure pools. See “Expenses” heading for a reconciliation of direct employee costs and other corporate costs to total operating expenses.

“EBITDA” refers to net income before adjusting for depreciation expense, finance income, finance costs, and income and other taxes. EBITDA should not be construed as an alternative to net income as determined by IFRS. The Company believes that EBITDA is useful supplemental information as it provides an indication of the results generated by the Company’s main business activities prior to consideration of how those activities are amortized, financed or taxed. See “EBITDA” heading for a reconciliation of EBITDA to net income.

“Funds flow from operations” is a non-IFRS financial measure that represents net income adjusted for certain non-cash items, such as depreciation expense, non-cash stock-based compensation expense, deferred tax expense (recovery) and deferred rent. The Company considers funds flow from operations a useful measure as it represents the cash generated during the period, regardless of the timing of collection of receivables and payment of payables, and demonstrates the Company’s ability to generate the cash flow necessary to fund future growth and dividend payments. Funds flow from operations may not be comparable to similar measures presented by other companies.

### Funds Flow from Operations, as Reconciled to Net Income

(\$ thousands)	Fiscal 2017		Q1	Q2	Fiscal 2018		Q1	Fiscal 2019
	Q3	Q4			Q3	Q4		Q2
Net income for the period	7,259	5,205	4,957	4,606	5,097	6,146	4,258	<b>5,056</b>
Non-cash items:								
Depreciation	270	237	469	475	492	561	463	<b>481</b>
Stock-based compensation	465	512	464	530	601	492	761	<b>(29)</b>
Deferred tax expense (recovery)	90	131	(513)	(170)	(71)	(21)	(346)	<b>163</b>
Deferred rent	-	-	828	347	106	107	106	<b>106</b>
Funds flow from operations	8,084	6,085	6,205	5,788	6,225	7,285	5,242	<b>5,777</b>

Funds flow from operations can also be derived by adjusting the IFRS measure Net Cash Provided by Operating Activities presented in the Company’s consolidated statements of cash flows for the net change in non-cash working capital and the difference between income tax expense accrued and paid and interest income accrued and received. Accordingly, the Company has provided a second reconciliation “Funds Flow from Operations, as Reconciled to Net Cash Provided by Operating Activities”:

**Funds Flow from Operations, as Reconciled to Net Cash Provided by Operating Activities**

(\$ thousands)	Fiscal 2017		Q1	Q2	Fiscal 2018		Fiscal 2019	
	Q3	Q4			Q3	Q4	Q1	Q2
Net cash provided by (used in) operating activities	(2,568)	18,140	11,132	(4,027)	4,127	19,298	4,716	<b>277</b>
Net change in non-cash working capital	12,344	(11,309)	(5,483)	8,906	2,532	(10,974)	202	<b>5,135</b>
Current income tax expense	(2,827)	(2,349)	(2,486)	(1,817)	(2,125)	(2,422)	(2,068)	<b>(1,885)</b>
Income taxes paid	1,141	1,620	3,038	2,727	1,704	1,373	2,391	<b>2,262</b>
Interest income	136	114	202	218	228	257	303	<b>312</b>
Interest received	(142)	(131)	(198)	(219)	(241)	(247)	(302)	<b>(324)</b>
Funds flow from operations	8,084	6,085	6,205	5,788	6,225	7,285	5,242	<b>5,777</b>

**Corporate Profile**

CMG is a computer software technology company serving the oil and gas industry. The Company is a leading supplier of advanced process reservoir modelling software with a blue chip customer base of international oil companies and technology centers in approximately 60 countries. The Company also provides professional services consisting of highly specialized support, consulting, training, and contract research activities. CMG has sales and technical support services based in Calgary, Houston, London, Dubai, Bogota and Kuala Lumpur. CMG's Common Shares are listed on the Toronto Stock Exchange ("TSX") and trade under the symbol "CMG".

**Quarterly Performance**

(\$ thousands, unless otherwise stated)	Fiscal 2017		Q1	Q2	Fiscal 2018		Fiscal 2019	
	Q3	Q4			Q3	Q4	Q1	Q2
Annuity/maintenance licenses <sup>(1)</sup>	18,378	14,613	16,516	16,341	16,158	15,664	14,715	<b>15,111</b>
Perpetual licenses	835	3,036	1,078	290	743	2,053	326	<b>1,172</b>
Software licenses	19,213	17,649	17,594	16,631	16,901	17,717	15,041	<b>16,283</b>
Professional services	1,082	1,409	1,392	1,350	1,418	1,677	1,664	<b>1,658</b>
Total revenue	20,295	19,058	18,986	17,981	18,319	19,394	16,705	<b>17,941</b>
Operating profit	9,811	7,630	6,978	6,615	6,908	7,529	5,374	<b>7,024</b>
Operating profit (%)	48	40	37	37	38	39	32	<b>39</b>
EBITDA <sup>(2)</sup>	10,081	7,867	7,447	7,090	7,400	8,090	5,837	<b>7,505</b>
Profit before income and other taxes	10,176	7,685	6,930	6,253	7,151	8,547	5,980	<b>7,104</b>
Income and other taxes	2,917	2,480	1,973	1,647	2,054	2,401	1,722	<b>2,048</b>
Net income for the period	7,259	5,205	4,957	4,606	5,097	6,146	4,258	<b>5,056</b>
Cash dividends declared and paid	7,930	7,942	7,977	8,021	8,022	8,021	8,021	<b>8,024</b>
Funds flow from operations <sup>(3)</sup>	8,084	6,085	6,205	5,788	6,225	7,285	5,242	<b>5,777</b>
Per share amounts - (\$/share)								
Earnings per share - basic	0.09	0.07	0.06	0.06	0.06	0.08	0.05	<b>0.06</b>
Earnings per share - diluted	0.09	0.07	0.06	0.06	0.06	0.08	0.05	<b>0.06</b>
Cash dividends declared and paid	0.10	0.10	0.10	0.10	0.10	0.10	0.10	<b>0.10</b>
Funds flow from operations per share - basic <sup>(3)</sup>	0.10	0.08	0.08	0.07	0.08	0.09	0.07	<b>0.07</b>

(1) Q3, and Q4 of fiscal 2017 include \$3.7 million and \$0.7 million, respectively, in revenue that pertains to usage of CMG's products in prior quarters.

Q1, Q2, Q3 and Q4 of fiscal 2018 include \$1.5 million, \$1.0 million, \$0.6 million and \$1.3 million, respectively, in revenue that pertains to usage of CMG's products in prior quarters.

Q1 and Q2 of fiscal 2019 include \$0.1 million and \$0.3 million, respectively, in revenue that pertains to usage of CMG's products in prior quarters.

(2) EBITDA is a non-IFRS financial measure defined as net income before adjusting for depreciation expense, finance income, finance costs, and income and other taxes. See "Non-IFRS Financial Measures".

(3) Funds flow from operations is a non-IFRS financial measure that represents net income adjusted for depreciation expense, non-cash stock-based compensation expense, deferred tax expense (recovery) and deferred rent. See "Non-IFRS Financial Measures".

## Highlights

During the six months ended September 30, 2018, as compared to the same period of the previous fiscal year, CMG:

- Experienced a 9% decrease in annuity/maintenance license revenue as a result of timing differences of revenue recognition on certain contracts and a change in accounting policy. If normalized for these items, annuity/maintenance license revenue grew by a low single-digit percentage (see pages 9 and 10);
- Increased perpetual license revenue by 10%, supported by strong perpetual sales in the second quarter;
- Experienced a 5% decrease in total operating expenses, mainly due to the fact that the comparative period included \$0.6 million of non-recurring charges related to the move to the new headquarters.

During the six months ended September 30, 2018, CMG:

- Realized basic earnings per share of \$0.12;
- Declared and paid a regular dividend of \$0.20 per share.

## Revenue

Three months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
Software license revenue	16,283	16,631	(348)	-2%
Professional services	1,658	1,350	308	23%
<b>Total revenue</b>	<b>17,941</b>	<b>17,981</b>	<b>(40)</b>	<b>0%</b>
Software license revenue as a % of total revenue	91%	92%		
Professional services as a % of total revenue	9%	8%		

Six months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
Software license revenue	31,324	34,225	(2,901)	-8%
Professional services	3,322	2,742	580	21%
<b>Total revenue</b>	<b>34,646</b>	<b>36,967</b>	<b>(2,321)</b>	<b>-6%</b>
Software license revenue as a % of total revenue	90%	93%		
Professional services as a % of total revenue	10%	7%		

CMG's revenue is comprised of software license sales, which provide the majority of the Company's revenue, and fees for professional services.

On April 1, 2018, the Company adopted IFRS 15 *Revenue from Contracts with Customers* using the cumulative effect method, by recognizing the cumulative effect of initially applying IFRS 15 as an adjustment to the opening balance of equity at April 1, 2018. The Company recorded an increase to retained earnings of \$0.7 million (\$0.5 million net of tax), on April 1, 2018, due to earlier recognition of revenue on certain term-based software licenses. Under the cumulative effect method, comparative information is not restated and continues to be reported under the previous standard, IAS 18 *Revenue*. For more information, refer to note 3 of the Company's condensed consolidated interim financial statements.

Total revenue for the three months ended September 30, 2018 remained flat compared to the same period of the previous fiscal year, due to a decrease in software license revenue offset by an increase in professional services revenue. Total revenue for the six months ended September 30, 2018 decreased by 6% compared to the same period of the previous fiscal year, as a decrease in software license revenue was partially offset by an increase in professional services revenue.

The adoption of IFRS 15 and the resultant early revenue recognition through opening equity had a negative impact of \$0.2 million and \$0.4 million on software license revenue for the three and six months ended September 30, 2018, respectively. The remainder of the decrease was due to the timing of revenue recognition on certain contracts.

## Software License Revenue

Software license revenue is made up of annuity/maintenance license fees charged for the use of the Company's software products, which is generally for a term of one year or less, and perpetual software license sales, whereby the customer purchases the then-current version of the software and has the right to use that version in perpetuity. Annuity/maintenance license fees have historically had a high renewal rate and, accordingly, provide a reliable revenue stream, while perpetual license sales are more variable and unpredictable in nature as the purchase decision and its timing fluctuate with the customers' needs and budgets. The majority of CMG's customers who have acquired perpetual software licenses subsequently purchase our maintenance package to ensure ongoing product support and access to current versions of CMG's software.

Three months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
Annuity/maintenance license revenue	15,111	16,341	(1,230)	-8%
Perpetual license revenue	1,172	290	882	304%
<b>Total software license revenue</b>	<b>16,283</b>	<b>16,631</b>	<b>(348)</b>	<b>-2%</b>
Annuity/maintenance as a % of total software license revenue	93%	98%		
Perpetual as a % of total software license revenue	7%	2%		

Six months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
Annuity/maintenance license revenue	29,826	32,857	(3,031)	-9%
Perpetual license revenue	1,498	1,368	130	10%
<b>Total software license revenue</b>	<b>31,324</b>	<b>34,225</b>	<b>(2,901)</b>	<b>-8%</b>
Annuity/maintenance as a % of total software license revenue	95%	96%		
Perpetual as a % of total software license revenue	5%	4%		

Total software license revenue for the three and six months ended September 30, 2018 decreased by 2% and 8%, compared to the same periods of the previous fiscal year, due to decreases in annuity/maintenance license revenue.

CMG's annuity/maintenance license revenue decreased by 8% and 9% during the three and six months ended September 30, 2018, compared to the same periods of the previous fiscal year, due to a decrease in Canada, as well as decreases in South America and the Eastern Hemisphere, which were caused mainly by the timing of revenue recognition on certain contracts. These decreases were partially offset by an increase in the United States.

Our annuity/maintenance license revenue can be significantly impacted by the variability of the amounts recorded from a long-standing customer and its affiliates for whom revenue recognition criteria are fulfilled only at the time of the receipt of funds (see the discussion about revenue earned in the current quarter that pertains to usage of products in prior quarters above the "Quarterly Software License Revenue" graph). Due to the economic conditions in the country where this customer and its affiliates are located, revenue from them will continue to be recognized on a cash basis. The timing of such payments may skew the comparison of annuity/maintenance license revenue between periods. We received payments from these customers in the first and second quarters of the previous fiscal year, but none in the current year. Normalized for these receipts, annuity/maintenance license revenue for the three and six months ended September 30, 2018 decreased by 2% and 4%, respectively, instead of decreasing by 8% and 9%, compared to the same periods of the previous fiscal year.

These normalized decreases of 2% and 4% were due to the timing of revenue recognition on certain contracts in the Eastern Hemisphere, as well as the negative impact of IFRS 15 adoption. Overall, when normalized for the receipts recognized into revenue on a cash basis, the timing differences on certain contracts and the impact of IFRS 15 adoption, annuity/maintenance license revenue for the three and six months ended September 30, 2018 grew by a low single-digit percentage. In addition, the movement in the CAD/USD exchange rate had a negative impact of approximately 2% and 3% on annuity/maintenance license revenue for the three and six months ended September 30, 2018, respectively.

Perpetual license revenue increased in the three and six months ended September 30, 2018, compared to the same periods of the previous fiscal year, as there were more perpetual sales realized in the Eastern Hemisphere and Canada. Software licensing under perpetual sales may fluctuate significantly between periods due to the uncertainty associated with the timing and the location where sales are generated. For this reason, even though we expect to achieve a certain level of aggregate perpetual sales on an annual basis, we expect to observe fluctuations in the quarterly perpetual revenue amounts throughout the fiscal year.

We can observe from the tables below that the exchange rate between the US and Canadian dollars during the three and six months ended September 30, 2018, compared to the same periods of the previous fiscal year, had a negative impact on reported software license revenue, with the exception of perpetual revenue for the three months ended September 30, 2018.

The following table summarizes the US dollar-denominated revenue and the weighted average exchange rate at which it was converted to Canadian dollars:

Three months ended September 30, (\$ thousands)		2018	2017	\$ change	% change
US dollar annuity/maintenance license revenue	US\$	9,353	9,860	(507)	-5%
Weighted average conversion rate		1.278	1.320		
Canadian dollar equivalent	CDN\$	11,950	13,014	(1,064)	-8%
US dollar perpetual license revenue	US\$	898	230	668	290%
Weighted average conversion rate		1.305	1.265		
Canadian dollar equivalent	CDN\$	1,172	291	881	303%
Six months ended September 30, (\$ thousands)		2018	2017	\$ change	% change
US dollar annuity/maintenance license revenue	US\$	18,323	19,902	(1,579)	-8%
Weighted average conversion rate		1.277	1.326		
Canadian dollar equivalent	CDN\$	23,390	26,381	(2,991)	-11%
US dollar perpetual license revenue	US\$	1,151	1,030	121	12%
Weighted average conversion rate		1.302	1.328		
Canadian dollar equivalent	CDN\$	1,498	1,368	130	10%

The following table quantifies the foreign exchange impact on our software license revenue:

Three months ended September 30, (\$ thousands)	2017	Incremental License Growth	Foreign Exchange Impact	2018
Annuity/maintenance license revenue	16,341	(834)	(396)	15,111
Perpetual license revenue	290	846	36	1,172
Total software license revenue	16,631	12	(360)	16,283

Six months ended September 30, (\$ thousands)	2017	Incremental License Growth	Foreign Exchange Impact	2018
Annuity/maintenance license revenue	32,857	(2,133)	(898)	<b>29,826</b>
Perpetual license revenue	1,368	161	(31)	<b>1,498</b>
<b>Total software license revenue</b>	<b>34,225</b>	<b>(1,972)</b>	<b>(929)</b>	<b>31,324</b>

As discussed previously, our annuity/maintenance license revenue can be significantly impacted by the variability of the amounts recorded from a long-standing customer and its affiliates for whom revenue recognition criteria are fulfilled only at the time of the receipt of funds. If we were to normalize for such receipts, the annuity/maintenance license revenue decrease for the six months ended September 30, 2018 in the above table would have been \$0.4 million instead of \$2.1 million.

### Software Revenue by Geographic Segment

Three months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
<b><i>Annuity/maintenance license revenue</i></b>				
Canada	<b>3,792</b>	4,462	(670)	-15%
United States	<b>4,626</b>	4,466	160	4%
South America	<b>1,732</b>	2,412	(680)	-28%
Eastern Hemisphere <sup>(1)</sup>	<b>4,961</b>	5,001	(40)	-1%
	<b>15,111</b>	16,341	(1,230)	-8%
<b><i>Perpetual license revenue</i></b>				
Canada	<b>156</b>	-	156	100%
United States	<b>152</b>	129	23	18%
South America	<b>-</b>	62	(62)	-100%
Eastern Hemisphere	<b>864</b>	99	765	773%
	<b>1,172</b>	290	882	304%
<b><i>Total software license revenue</i></b>				
Canada	<b>3,948</b>	4,462	(514)	-12%
United States	<b>4,778</b>	4,595	183	4%
South America	<b>1,732</b>	2,474	(742)	-30%
Eastern Hemisphere	<b>5,825</b>	5,100	725	14%
	<b>16,283</b>	16,631	(348)	-2%



Six months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
<b>Annuity/maintenance license revenue</b>				
Canada	7,659	8,626	(967)	-11%
United States	9,179	9,057	122	1%
South America	3,413	4,745	(1,332)	-28%
Eastern Hemisphere <sup>(1)</sup>	9,575	10,429	(854)	-8%
	<b>29,826</b>	<b>32,857</b>	<b>(3,031)</b>	<b>-9%</b>
<b>Perpetual license revenue</b>				
Canada	156	-	156	100%
United States	152	155	(3)	-2%
South America	-	220	(220)	-100%
Eastern Hemisphere	1,190	993	197	20%
	<b>1,498</b>	<b>1,368</b>	<b>130</b>	<b>10%</b>
<b>Total software license revenue</b>				
Canada	7,815	8,626	(811)	-9%
United States	9,331	9,212	119	1%
South America	3,413	4,965	(1,552)	-31%
Eastern Hemisphere	10,765	11,422	(657)	-6%
	<b>31,324</b>	<b>34,225</b>	<b>(2,901)</b>	<b>-8%</b>

(1) Includes Europe, Africa, Asia and Australia.

During the three months ended September 30, 2018, as compared to the same period of the previous fiscal year, Canada and South America experienced a decrease in total software license revenue, which were partially offset by increases in the Eastern Hemisphere and the United States.

During the six months ended September 30, 2018, as compared to the same period of the previous fiscal year, three regions experienced a decrease in total software license revenue, and revenue in the United States increased.

The Canadian market (representing 25% of year-to-date software license revenue) experienced 15% and 11% decreases in annuity/maintenance license revenue during the three and six months ended September 30, 2018, respectively, compared to the same periods of the previous fiscal year, due to a reduction in licensing by some customers. Perpetual revenue increased in the current period, as there were no perpetual sales recognized in the comparative period.

The United States market (representing 30% of year-to-date software license revenue) experienced 4% and 1% increases in annuity/maintenance license revenue during the three and six months ended September 30, 2018, compared to the same periods of the previous fiscal year, despite the negative impact of IFRS 15 adoption. These increases are mainly a result of increased licensing by new and existing customers involved in unconventional shale and tight hydrocarbon recovery processes. Perpetual sales during the three and six months ended September 30, 2018 were consistent with the comparative periods.

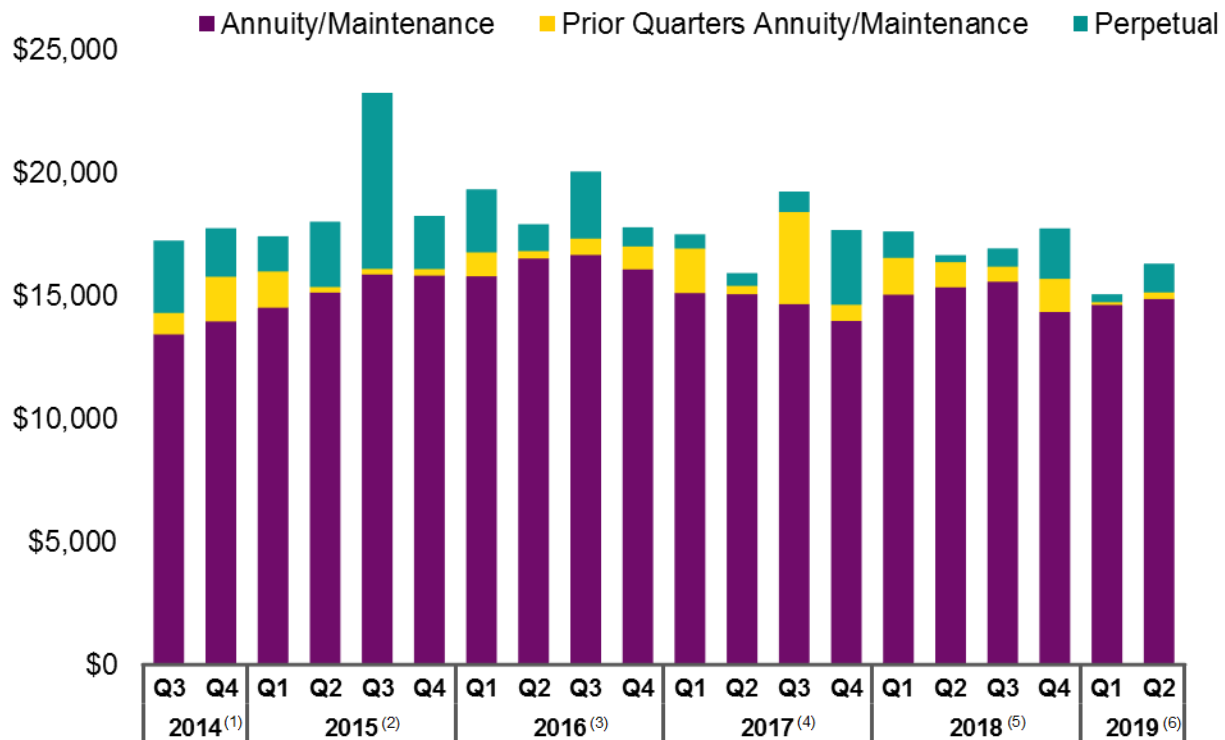
South America (representing 11% of year-to-date software license revenue) experienced a decrease of 28% in annuity/maintenance license revenue during the three and six months ended September 30, 2018, compared to the same periods of the previous fiscal year. Our revenue in South America can be significantly impacted by the variability of the amounts recorded from a customer and its affiliates for whom revenue is recognized only when cash is received (see the discussion about revenue earned in the current quarter that pertains to usage of products in prior quarters on the next page, above the "Quarterly Software License Revenue" graph). We received payments from these customers in the first and second quarters of the previous fiscal year, but none were received in the current year. To provide a normalized comparison, if we remove the revenue from this particular customer from the three and six months ended September 30, 2017, we note that the South American annuity/maintenance license revenue increased by 13% and 12% for the three and six months ended September 30, 2018, respectively, instead of decreasing by 28%. No perpetual sales were realized in South America during the three and six months ended September 30, 2018.

The Eastern Hemisphere (representing 34% of year-to-date software license revenue) experienced 1% and 8% decreases in annuity/maintenance license revenue during the three and six months ended September 30, 2018, compared to the same periods of the previous fiscal year, mainly due to differences in the timing of revenue recognition on certain contracts, particularly during the first quarter of the current fiscal year. The Eastern Hemisphere's perpetual license revenue for the three and six months ended September 30, 2018 was significantly higher than the same periods of the previous fiscal year, as a result of several perpetual sales realized during the second quarter of the current fiscal year.

As footnoted in the Quarterly Performance table, in the normal course of business CMG may complete the negotiation of certain annuity/maintenance contracts and/or fulfill revenue recognition requirements within a current quarter that includes usage of CMG's products in prior quarters. This situation particularly affects contracts negotiated with countries that face increased economic and political risks leading to the revenue recognition criteria being satisfied only at the time of the receipt of cash. The dollar magnitude of such contracts may be significant to the quarterly comparatives of our annuity/maintenance license revenue stream. To provide a normalized comparison, we specifically identify the revenue component where revenue recognition is satisfied in the current period for products provided in previous quarters.

### Quarterly Software License Revenue

(\$thousands)



- (1) Q3 and Q4 of fiscal 2014 include \$0.9 million, and \$1.8 million, respectively, in revenue that pertains to usage of CMG's products in prior quarters.
- (2) Q1, Q2, Q3 and Q4 of fiscal 2015 include \$1.5 million, \$0.2 million, \$0.2 million, and \$0.3 million, respectively, in revenue that pertains to usage of CMG's products in prior quarters.
- (3) Q1, Q2, Q3 and Q4 of fiscal 2016 include \$1.0 million, \$0.3 million, \$0.7 million, and \$0.9 million, respectively, in revenue that pertains to usage of CMG's products in prior quarters.
- (4) Q1, Q2, Q3 and Q4 of fiscal 2017 include \$1.8 million, \$0.3 million, \$3.7 million, and \$0.7 million, respectively, in revenue that pertains to usage of CMG's products in prior quarters.
- (5) Q1, Q2, Q3 and Q4 of fiscal 2018 include \$1.5 million, \$1.0 million, \$0.6 million, and \$1.3 million, respectively, in revenue that pertains to usage of CMG's products in prior quarters.
- (6) Q1 and Q2 of fiscal 2019 includes \$0.1 million and \$0.3 million, respectively, in revenue that pertains to usage of CMG's products in prior quarters.

## Deferred Revenue

(\$ thousands)	Fiscal 2019	Fiscal 2018	Fiscal 2017	\$ change	% change
Deferred revenue at:					
Q1 (June 30)	<b>29,350</b> <sup>(5)</sup>	31,551 <sup>(2)</sup>		(2,201)	-7%
Q2 (September 30)	<b>23,222</b> <sup>(6)</sup>	23,686 <sup>(3)</sup>		(464)	-2%
Q3 (December 31)		17,785	18,916	(1,131)	-6%
Q4 (March 31)		34,362 <sup>(4)</sup>	38,232 <sup>(1)</sup>	(3,870)	-10%

(1) Includes current deferred revenue of \$36.3 million and long-term deferred revenue of \$1.9 million.

(2) Includes current deferred revenue of \$30.3 million and long-term deferred revenue of \$1.3 million.

(3) Includes current deferred revenue of \$23.0 million and long-term deferred revenue of \$0.6 million.

(4) Includes current deferred revenue of \$33.4 million and long-term deferred revenue of \$1.0 million.

(5) Includes current deferred revenue of \$28.8 million and long-term deferred revenue of \$0.6 million.

(6) Includes current deferred revenue of \$22.9 million and long-term deferred revenue of \$0.3 million.

CMG's deferred revenue consists primarily of amounts for pre-sold licenses. With the exception of certain term-based software licenses that are recognized at the start of the license period, our annuity/maintenance revenue is deferred and recognized ratably over the license period, which is generally one year or less. Amounts are deferred for licenses that have been provided and revenue recognition reflects the passage of time.

The above table illustrates the normal trend in the deferred revenue balance from the beginning of the calendar year (which corresponds with Q4 of our fiscal year), when most renewals occur, to the end of the calendar year (which corresponds with Q3 of our fiscal year). Our fourth quarter corresponds with the beginning of the fiscal year for most oil and gas companies, representing a time when they enter a new budget year and sign/renew their contracts.

Deferred revenue as at Q2 of fiscal 2019 decreased by 2% compared to Q2 of fiscal 2018, primarily due to one significant multi-year contract that commenced during Q4 of fiscal 2017 and included a large upfront payment for future software use and lower payments during the remainder of the contract period.

## Professional Services Revenue

CMG recorded professional services revenue of \$1.7 million and \$3.3 million for the three and six months ended September 30, 2018, respectively, which represents increases of 23% and 21% when compared to the same periods of the previous fiscal year. These increases were due to increased project activity by our customers, which resulted in higher consulting revenue.

Professional services revenue consists of specialized consulting, training, and contract research activities. CMG performs consulting and contract research activities on an ongoing basis, but such activities are not considered to be a core part of our business and are primarily undertaken to increase our knowledge base and hence expand the technological abilities of our simulators in a funded manner, combined with servicing our customers' needs. In addition, these activities are undertaken to market the capabilities of our suite of software products with the ultimate objective to increase software license sales. Our experience is that consulting activities are variable in nature as both the timing and dollar magnitude of work are dependent on activities and budgets within customer companies.

## Expenses

Three months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
Sales, marketing and professional services	4,378	4,779	(401)	-8%
Research and development	4,862	4,865	(3)	0%
General and administrative	1,677	1,722	(45)	-3%
<b>Total operating expenses</b>	<b>10,917</b>	<b>11,366</b>	<b>(449)</b>	<b>-4%</b>
Direct employee costs <sup>(1)</sup>	7,802	8,268	(466)	-6%
Other corporate costs	3,115	3,098	17	1%
	<b>10,917</b>	<b>11,366</b>	<b>(449)</b>	<b>-4%</b>

Six months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
Sales, marketing and professional services	9,365	9,696	(331)	-3%
Research and development	9,637	10,172	(535)	-5%
General and administrative	3,246	3,506	(260)	-7%
<b>Total operating expenses</b>	<b>22,248</b>	<b>23,374</b>	<b>(1,126)</b>	<b>-5%</b>
Direct employee costs <sup>(1)</sup>	16,517	16,771	(254)	-2%
Other corporate costs	5,731	6,603	(872)	-13%
	<b>22,248</b>	<b>23,374</b>	<b>(1,126)</b>	<b>-5%</b>

(1) Includes salaries, bonuses, stock-based compensation, benefits, commissions, and professional development. See "Non-IFRS Financial Measures".

CMG's total operating expenses decreased by 4% and 5% for the three and six months ended September 30, 2018, respectively, compared to the same periods of the previous fiscal year. The decrease for the three-month period was due to lower direct employee costs and the decrease for the six-month period was due to decreases in both direct employees costs and other corporate costs.

### Direct Employee Costs

As a technology company, CMG's largest area of expenditure is its people. Approximately 74% of total operating expenses for the six months ended September 30, 2018 related to direct employee costs. Staffing levels in the current fiscal year were slightly lower compared to the previous fiscal year. At September 30, 2018, CMG's full-time equivalent staff complement was 191 employees and consultants, down from 196 full-time equivalent employees and consultants at September 30, 2017. Direct employee costs decreased during the three months ended September 30, 2018, compared to the same period of the previous fiscal year, due to a decrease in stock-based compensation expense. Direct employee costs decreased during the six months ended September 30, 2018, compared to the same period of the previous fiscal year, mainly due to a lower headcount.

### Other Corporate Costs

Other corporate costs for the three months ended September 30, 2018 remained consistent with the same period of the previous fiscal year. Other corporate costs for the six months ended September 30, 2018 decreased by 13% compared to the same period of the previous fiscal year, mainly because the comparative period included \$0.6 million of non-recurring charges related to the move to the new headquarters.

## Research and Development

Three months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
Research and development (gross)	5,239	5,303	(64)	-1%
SR&ED credits	(377)	(438)	61	-14%
Research and development	4,862	4,865	(3)	0%
Research and development as a % of total revenue	27%	27%		

Six months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
Research and development (gross)	10,424	11,065	(641)	-6%
SR&ED credits	(787)	(893)	106	-12%
Research and development	9,637	10,172	(535)	-5%
Research and development as a % of total revenue	28%	28%		

CMG maintains a belief that its strategy of growing long-term value for shareholders can only be achieved through continued investment in research and development. CMG works closely with its customers to provide solutions to complex problems related to proven and new advanced recovery processes.

The above research and development costs include \$1.9 million and \$3.8 million of costs for CoFlow for the three and six months ended September 30, 2018, respectively, (2017 – \$1.9 million and \$3.9 million). See discussion under “Commitments, Off Balance Sheet Items and Transactions with Related Parties”.

Research and development costs (gross) remained consistent during the three months ended September 30, 2018, compared to the same period of the previous fiscal year. Research and development costs (gross) decreased by 6% during the six months ended September 30, 2018, compared to the same period of the previous fiscal year, mainly due to non-recurring charges related to the move included in the comparative period.

SR&ED credits decreased by 14% and 12% for the three and six months ended September 30, 2018, respectively, compared to the same periods of the previous fiscal year, due to a decrease in hours spent on SR&ED-eligible projects.

Research and development costs as a percentage of total revenue were 27% and 28% for the three and six months ended September 30, 2018, which is consistent with the same periods of the previous fiscal year.

## Depreciation

Three months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
Depreciation of property and equipment, allocated to:				
Sales, marketing and professional services	113	117	(4)	-3%
Research and development	310	294	16	5%
General and administrative	58	64	(6)	-9%
Total depreciation	481	475	6	1%

Six months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
Depreciation of property and equipment, allocated to:				
Sales, marketing and professional services	218	229	(11)	-5%
Research and development	612	585	27	5%
General and administrative	114	130	(16)	-12%
<b>Total depreciation</b>	<b>944</b>	<b>944</b>	<b>-</b>	<b>0%</b>

Depreciation for the three and six months ended September 30, 2018 remained consistent compared to the same periods of the previous fiscal year.

### Finance Income and Costs

Three months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
Interest income	312	218	94	43%
<b>Total finance income</b>	<b>312</b>	<b>218</b>	<b>94</b>	<b>43%</b>
Net foreign exchange loss	(232)	(580)	348	-60%
<b>Total finance costs</b>	<b>(232)</b>	<b>(580)</b>	<b>348</b>	<b>-60%</b>

Six months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
Interest income	615	420	195	46%
Net foreign exchange gain	71	-	71	100%
<b>Total finance income</b>	<b>686</b>	<b>420</b>	<b>266</b>	<b>63%</b>
Net foreign exchange loss	-	(830)	830	-100%
<b>Total finance costs</b>	<b>-</b>	<b>(830)</b>	<b>830</b>	<b>-100%</b>

Interest income for the three and six months ended September 30, 2018 was higher compared to the same periods of the previous fiscal year, due to higher interest rates.

CMG is impacted by foreign exchange fluctuations as approximately 75% of CMG's revenue for the six months ended September 30, 2018 (2017 – 78%) is denominated in US dollars, whereas only approximately 26% (2017 – 25%) of CMG's total costs are denominated in US dollars.

The following chart shows the exchange rates used to translate CMG's US dollar-denominated working capital at September 30, 2018, 2017 and 2016 and the average exchange rates used to translate income statement items during the three months ended September 30, 2018, 2017 and 2016:

CDN\$ to US\$	At June 30	At September 30	Six month trailing average
2016	0.7687	0.7624	0.7713
2017	0.7706	0.8013	0.7654
<b>2018</b>	<b>0.7594</b>	<b>0.7725</b>	<b>0.7701</b>

CMG recorded a net foreign exchange loss of \$0.2 million for the three months ended September 30, 2018, due to a weakening of the US dollar, which negatively affected the valuation of the US-dollar denominated portion of the Company's working capital.

CMG recorded a net foreign exchange gain of \$0.1 million for the six months ended September 30, 2018, due to a strengthening of the US dollar, which positively affected the valuation of the US-dollar denominated portion of the Company's working capital.

## Income and Other Taxes

CMG's effective tax rate for the six months ended September 30, 2018 is 28.8% (2017 – 27.5%), whereas the prevailing Canadian statutory tax rate is now 27.0%. This difference is primarily due to the non-tax deductibility of stock-based compensation expense.

The benefit recorded in CMG's books on the scientific research and experimental development ("SR&ED") investment tax credit program impacts deferred income taxes. The investment tax credit earned in the current fiscal year is utilized by CMG to reduce income taxes otherwise payable for the current fiscal year and the federal portion of this benefit bears an inherent tax liability as the amount of the credit is included in the subsequent year's taxable income for both federal and provincial purposes. The inherent tax liability on these investment tax credits is reflected in the year the credit is earned as a non-current deferred tax liability and then, in the following fiscal year, is transferred to income taxes payable.

## Operating Profit and Net Income

Three months ended September 30, (\$ thousands, except per share amounts)	2018	2017	\$ change	% change
Total revenue	17,941	17,981	(40)	0%
Operating expenses	(10,917)	(11,366)	449	-4%
Operating profit	7,024	6,615	409	6%
Operating profit as a % of total revenue	39%	37%		
Net income for the period	5,056	4,606	450	10%
Net income for the period as a % of total revenue	28%	26%		
Basic earnings per share (\$/share)	0.06	0.06	-	0%
Six months ended September 30, (\$ thousands, except per share amounts)	2018	2017	\$ change	% change
Total revenue	34,646	36,967	(2,321)	-6%
Operating expenses	(22,248)	(23,374)	1,126	-5%
Operating profit	12,398	13,593	(1,195)	-9%
Operating profit as a % of total revenue	36%	37%		
Net income for the period	9,314	9,563	(249)	-3%
Net income for the period as a % of total revenue	27%	26%		
Basic earnings per share (\$/share)	0.12	0.12	-	0%

Operating profit as a percentage of total revenue was 39% for the three months ended September 30, 2018, which represents an increase compared to the same period of the previous fiscal year. This was due to lower operating expenses in the current quarter. Operating profit as a percentage of total revenue decreased slightly to 36% during the six months ended September 30, 2018, compared to the same period of the previous fiscal year, as the decrease in total revenue was greater than the decrease in operating expenses.

Net income as a percentage of revenue was 28% and 27% for the three and six months ended September 30, 2018, which was consistent with the same periods of the previous fiscal year.

**EBITDA<sup>(1)</sup>**

Three months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
Net income for the period	5,056	4,606	450	10%
Add (deduct):				
Depreciation	481	475	6	1%
Finance (income) expense	(80)	362	(442)	-122%
Income and other taxes	2,048	1,647	401	24%
<b>EBITDA</b>	<b>7,505</b>	<b>7,090</b>	<b>415</b>	<b>6%</b>
EBITDA as a % of total revenue	42%	39%		

Six months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
Net income for the period	9,314	9,563	(249)	-3%
Add (deduct):				
Depreciation	944	944	-	0%
Finance (income) expense	(686)	410	(1,096)	-267%
Income and other taxes	3,770	3,620	150	4%
<b>EBITDA</b>	<b>13,342</b>	<b>14,537</b>	<b>(1,195)</b>	<b>-8%</b>
EBITDA as a % of total revenue	39%	39%		

(1) EBITDA is defined as net income before adjusting for depreciation expense, finance income, finance costs, and income and other taxes. See "Non-IFRS Financial Measures".

EBITDA for the three months ended September 30, 2018 increased by 6%, compared to the same period of the previous fiscal year, due to lower operating expenses. EBITDA for the six months ended September 30, 2018 decreased by 8%, compared to the same period of the previous fiscal year, due to lower revenue, partially offset by lower operating expenses.

**Liquidity and Capital Resources**

Three months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
Cash, beginning of period	60,081	67,272	(7,191)	-11%
Cash flow from (used in):				
Operating activities	277	(4,027)	4,304	107%
Financing activities	(8,007)	(5,481)	(2,526)	-46%
Investing activities	(80)	(416)	336	81%
Cash, end of period	52,271	57,348	(5,077)	-9%

Six months ended September 30, (\$ thousands)	2018	2017	\$ change	% change
Cash, beginning of period	63,719	63,239	480	1%
Cash flow from (used in):				
Operating activities	4,993	7,105	(2,112)	-30%
Financing activities	(16,028)	(9,334)	(6,694)	-72%
Investing activities	(413)	(3,662)	3,249	89%
Cash, end of period	52,271	57,348	(5,077)	-9%



## Operating Activities

Cash flow from operating activities increased by \$4.3 million in the three months ended September 30, 2018, compared to the same period of the previous fiscal year. This was mainly due to the positive impact of the timing difference of when sales are made and when the resulting receivables are collected, the change in the deferred revenue balance, lower income tax installments and higher net income.

Cash flow from operating activities decreased by \$2.1 million in the six months ended September 30, 2018, compared to the same period of the previous fiscal year. This was mainly due to the negative impact of the timing difference of when sales are made and when the resulting receivables are collected, offset by the change in the deferred revenue balance and lower income tax installments.

## Financing Activities

Cash used in financing activities increased by \$2.5 million and \$6.7 million during the three and six months ended September 30, 2018, respectively, compared to the same periods of the previous fiscal year, because there were fewer option exercises in the current fiscal year. During the six months ended September 30, 2018, 2,000 options were exercised to purchase Common Shares, which resulted in cash proceeds of \$17,000 (six months ended September 30, 2017 – 733,000 options for cash proceeds of \$6.7 million)

In the six months ended September 30, 2018, CMG paid \$16.0 million in dividends, representing the following quarterly dividends:

(\$ per share)	Q1	Q2
Total dividends declared and paid	0.10	0.10

In the six months ended September 30, 2017 CMG paid \$16.0 million in dividends, representing the following quarterly dividends:

(\$ per share)	Q1	Q2
Total dividends declared and paid	0.10	0.10

On November 13, 2018, CMG announced the payment of a quarterly dividend of \$0.10 per share on CMG's Common Shares. The dividend will be paid on December 14, 2018 to shareholders of record at the close of business on December 6, 2018. Based on our expectation of profitability and cash-generating ability, we are cautiously optimistic that the Company is well positioned to continue paying quarterly dividends.

## Investing Activities

CMG's current needs for capital asset investment relate to office infrastructure costs and computer equipment, all of which are being funded internally. During the six months ended September 30, 2018, CMG's cash expenditures on property and equipment were \$0.4 million, primarily composed of computing equipment. CMG's capital budget for fiscal 2019 is \$1.5 million.

## Liquidity and Capital Resources

At September 30, 2018, CMG has \$52.3 million in cash, no debt, and has access to approximately \$0.8 million under a line of credit with its principal banker. The Company's primary non-operating use of cash is for paying dividends.

During the six months ended September 30, 2018, 10.8 million shares of CMG's public float were traded on the TSX. As at September 30, 2018, CMG's market capitalization based upon its September 30, 2018 closing price of \$8.45 was \$677.9 million.

## Commitments, Off Balance Sheet Items and Transactions with Related Parties

CMG, in partnership with Shell Global Solutions International B.V. ("Shell"), is the developer of CoFlow, the newest generation of reservoir and production system simulation software. Under a five-year agreement entered into by Shell and CMG on January 1, 2017, CMG is responsible for the research and development costs of CoFlow, while Shell provides a fixed fee contribution for the continuing development of the software. The Company's revenue and costs associated with CoFlow are estimated to be \$4.0 million and \$7.7 million, respectively, in fiscal 2019. CMG plans to continue funding project costs from internally generated cash flows.

CMG has very little in the way of other ongoing material contractual obligations other than pre-sold licenses, which are reflected as deferred revenue on the statement of financial position, and contractual obligations for office leases, which are estimated for our fiscal years as follows: 2019 – \$2.3 million; 2020 – \$4.5 million; 2021 – \$4.5 million; 2022 – \$4.5 million; 2023 – \$4.7 million; thereafter – \$72.3 million. These amounts include a twenty-year operating lease for the Calgary headquarters, which commenced in fiscal 2018.

## Business Risks and Critical Accounting Estimates

These remain unchanged from the factors detailed in CMG's 2018 Financial Report.

## Changes in Accounting Policies

Except as described below, accounting policies, presentation and methods of computation remain unchanged from those detailed in CMG's 2018 Financial Report.

### IFRS 15 *Revenue from Contracts with Customers*

On April 1, 2018, the Company adopted IFRS 15 *Revenue from Contracts with Customers*. IFRS 15 superseded previous accounting standards for revenue, including IAS 18 *Revenue* and related interpretations. IFRS 15 introduced a single model for recognizing revenue from contracts with customers. The model specifies that revenue is recognized when or as the Company transfers control of promised goods or services to a customer at the amount to which the Company expects to be entitled. Depending on certain criteria, revenue is recognized over time or at a point in time.

The Company has adopted IFRS 15 using the cumulative effect method, by recognizing the cumulative effect of initially applying IFRS 15 as an adjustment to the opening balance of equity at April 1, 2018. The Company recorded an increase to retained earnings of \$0.7 million (\$0.5 million net of tax) on April 1, 2018, due to the impact of certain term-based software licenses. Under the cumulative effect method, comparative information is not restated and continues to be reported under IAS 18 *Revenue*.

### IFRS 9 *Financial Instruments*

Effective April 1, 2018, the Company adopted IFRS 9 *Financial Instruments*, which sets out requirements for recognizing and measuring financial assets, financial liabilities and some contracts to buy or sell non-financial items. This standard replaces IAS 39 *Financial Instruments: Recognition and Measurement*. The adoption of IFRS 9 did not have an impact on the Company's financial information.

For more information, refer to note 3 of the Company's Condensed Consolidated Interim Financial Statements for the three and six months ended September 30, 2018.

## Accounting Standards and Interpretations Issued But Not Yet Effective

The following standard has not been adopted by the Company as it applies to future periods:

### IFRS 16 *Leases*

Replaces the guidance in IAS 17 *Leases* and requires the recognition of most leases on the balance sheet. IFRS 16 effectively removes the classification of leases as either finance or operating leases and treats all leases as finance leases for lessees with exemptions for short-term leases where the term is twelve months or less and for leases of low value items. IFRS 16 is effective January 1, 2019, with earlier adoption permitted. The Company intends to adopt IFRS 16 in its consolidated financial statements for the annual period beginning April 1, 2019. The extent of the impact of adoption of the standard has not yet been determined.

## Outstanding Share Data

The following table represents the number of Common Shares, stock options and restricted share units outstanding:

### As at November 13, 2018

(thousands)	
Common Shares	80,227
Stock options	5,166
Restricted share units <sup>(1)</sup>	232

(1) Upon vesting, a restricted share unit can be exchanged for a Common Share of the Company or surrendered for cash.

The maximum number of Common Shares that may be reserved for issuance under the Company's security-based compensation plans is limited to 10% of the issued and outstanding Common Shares. Based on this calculation, at November 13, 2018, CMG could reserve up to 8,022,000 Common Shares for issuance under its security-based compensation plans.

## Disclosure Controls and Procedures and Internal Control over Financial Reporting

Management is responsible for establishing and maintaining disclosure controls and procedures ("DC&P") and internal control over financial reporting ("ICFR") as defined under National Instrument 52-109. These controls and procedures were reviewed and the effectiveness of their design and operation was evaluated in fiscal 2018 in accordance with the COSO control framework (2013). The evaluation confirmed the effectiveness of DC&P and ICFR at March 31, 2018. During our fiscal year 2019, we continue to monitor and review our controls and procedures.

During the three months ended September 30, 2018, there have been no significant changes to the Company's ICFR that have materially affected, or are reasonably likely to materially affect, the Company's ICFR.

## Outlook

During the current quarter our total revenue was comparable to the same quarter of the previous year as a result of strong perpetual license sales and an increase in consulting activities, which offset a decrease in annuity and maintenance revenue. Current quarter's operating profit and net income increased by 6% and 10%, respectively, compared to the same quarter of the previous year, mainly as a result of reduced expenses.

The current quarter and year-to-date annuity and maintenance revenue continued to be negatively affected mainly by the timing differences of revenue recognition on certain contracts in South America and the Eastern Hemisphere and the change in accounting policy affecting the United States, contributing to a decrease in annuity and maintenance revenue of 8% and 9%, respectively. If normalized for those items, annuity and maintenance revenue experienced low single-digit growth on a world-wide basis. On a regional basis:

- Canadian annuity and maintenance revenue continued to be under pressure both during the quarter and on a year-to-date basis as a result of economic uncertainty that has affected the region over the past number of years. While the instability of the market appears to have lessened, we are going to focus on demonstrating to customers the value of our simulation tools for optimizing their production particularly during challenging times. In addition, we will continue working with customers entering exploration and development of Canada's unconventional hydrocarbon resources.
- The United States region continues to benefit from strong activity by unconventional customers, and while we achieved growth both in the current quarter and year to date, the results in the region were negatively affected by a change in revenue recognition accounting policy and the movement in the CAD/USD exchange rate. We are positively encouraged by the activity in the region and will continue to strengthen our presence by promoting our unconventional modelling workflows.
- South America grew by 13% during the quarter (12% year to date) after normalizing for payments from a customer for whom revenue is recognized only when cash is received, thus skewing the comparison between the periods.

- Eastern Hemisphere annuity and maintenance revenue for the current quarter was comparable to the same period of the previous year, while declining on a year-to-date basis. Both periods – and the first quarter of the current fiscal year in particular – have been negatively affected by revenue recognition on contracts for usage of our products in prior quarters as explained above the “Quarterly Software License Revenue” graph. Normalizing for these items, annuity and maintenance revenue grew by a low single-digit percentage in both periods. The Eastern Hemisphere was also negatively affected by the movement in foreign exchange.

We continue to be optimistic about the additions we have made to our customer base throughout fiscal 2018 and into the first half of fiscal 2019, which contributed to low single-digit growth in year-to-date annuity/maintenance license revenue after normalizing for the items described above. In particular, we are optimistic about the US market, where we continue to work with both existing and new customers on modelling workflows for unconventional assets. In all regions, we continue to demonstrate to customers the importance of reservoir simulation as a value creation tool for their enterprises, especially in times of economic and regulatory uncertainty.

CMG's year-to-date total operating expenses decreased by 5%, due mainly to the fact that the comparative period included \$0.6 million of non-recurring charges related to the move to the new headquarters. The remaining decrease was due to lower employee and head office costs.

We continue our efforts in marketing and trial modelling of CoFlow, our newest product that will provide a one-vendor solution for integrated asset modelling by combining reservoir, production networks and geomechanics in one environment. We continue identifying potential customers and performing trial modelling for them while Shell is deploying and using the software on its selected assets. The CoFlow team continues to work on feature development and performance improvement.

We ended the second quarter of 2019 with a strong balance sheet, no debt and \$52.3 million in cash. Subsequent to quarter end, CMG's Board of Directors declared a quarterly dividend of \$0.10 per share.



Ryan N. Schneider  
President and Chief Executive Officer  
November 13, 2018

## Condensed Consolidated Statements of Financial Position

UNAUDITED (thousands of Canadian \$)	September 30, 2018	March 31, 2018*
<b>Assets</b>		
Current assets:		
Cash	52,271	63,719
Trade and other receivables	10,104	16,272
Prepaid expenses	1,274	1,415
Prepaid income taxes (note 10)	387	-
	<b>64,036</b>	<b>81,406</b>
Property and equipment	15,181	16,062
Deferred tax asset (note 10)	704	522
<b>Total assets</b>	<b>79,921</b>	<b>97,990</b>
<b>Liabilities and shareholders' equity</b>		
Current liabilities:		
Trade payables and accrued liabilities	5,048	6,550
Income taxes payable (note 10)	11	126
Deferred revenue (note 6)	22,940	33,360
	<b>27,999</b>	<b>40,036</b>
Deferred revenue (note 6)	282	1,002
Deferred rent liability (note 5)	1,600	1,388
<b>Total liabilities</b>	<b>29,881</b>	<b>42,426</b>
Shareholders' equity:		
Share capital (note 11)	79,711	79,598
Contributed surplus	12,369	11,775
Deficit	(42,040)	(35,809)
<b>Total shareholders' equity</b>	<b>50,040</b>	<b>55,564</b>
<b>Total liabilities and shareholders' equity</b>	<b>79,921</b>	<b>97,990</b>

\* The Company adopted IFRS 15 effective April 1, 2018 using the cumulative effect method. Under this method, comparative information is not restated. See note 3.

Subsequent event (note 16)

See accompanying notes to condensed consolidated interim financial statements.

## Condensed Consolidated Statements of Operations and Comprehensive Income

UNAUDITED (thousands of Canadian \$ except per share amounts)	Three months ended September 30		Six months ended September 30	
	2018	2017*	2018	2017*
<b>Revenue</b> (note 7)	<b>17,941</b>	17,981	<b>34,646</b>	36,967
<b>Operating expenses</b>				
Sales, marketing and professional services	<b>4,378</b>	4,779	<b>9,365</b>	9,696
Research and development (note 8)	<b>4,862</b>	4,865	<b>9,637</b>	10,172
General and administrative	<b>1,677</b>	1,722	<b>3,246</b>	3,506
	<b>10,917</b>	11,366	<b>22,248</b>	23,374
<b>Operating profit</b>	<b>7,024</b>	6,615	<b>12,398</b>	13,593
Finance income (note 9)	<b>312</b>	218	<b>686</b>	420
Finance costs (note 9)	<b>(232)</b>	(580)	<b>-</b>	(830)
<b>Profit before income and other taxes</b>	<b>7,104</b>	6,253	<b>13,084</b>	13,183
Income and other taxes (note 10)	<b>2,048</b>	1,647	<b>3,770</b>	3,620
<b>Net and total comprehensive income</b>	<b>5,056</b>	4,606	<b>9,314</b>	9,563
<b>Earnings Per Share</b>				
Basic (note 11(d))	<b>0.06</b>	0.06	<b>0.12</b>	0.12
Diluted (note 11(d))	<b>0.06</b>	0.06	<b>0.12</b>	0.12

\* The Company adopted IFRS 15 effective April 1, 2018 using the cumulative effect method. Under this method, comparative information is not restated. See note 3.

See accompanying notes to condensed consolidated interim financial statements.

## Condensed Consolidated Statements of Changes in Equity

UNAUDITED (thousands of Canadian \$)	Common Share Capital	Contributed Surplus	Deficit	Total Equity
<b>Balance, April 1, 2017</b>	71,859	11,433	(24,574)	58,718
Total comprehensive income for the year	-	-	9,563	9,563
Dividends paid	-	-	(15,998)	(15,998)
Shares issued for cash on exercise of stock options (note 11(b))	6,664	-	-	6,664
Stock-based compensation:				
Current period expense (note 11(c))	-	786	-	786
Stock options exercised (note 11(b))	1,075	(1,075)	-	-
<b>Balance, September 30, 2017</b>	<b>79,598</b>	<b>11,144</b>	<b>(31,009)</b>	<b>59,733</b>
Balance, April 1, 2018	<b>79,598</b>	<b>11,775</b>	<b>(35,809)</b>	<b>55,564</b>
Impact of change in accounting policy*	-	-	500	500
<b>Adjusted balance, April 1, 2018</b>	<b>79,598</b>	<b>11,775</b>	<b>(35,309)</b>	<b>56,064</b>
Total comprehensive income for the period	-	-	9,314	9,314
Dividends paid	-	-	(16,045)	(16,045)
Shares issued on redemption of restricted share units (note 11(b))	93	-	-	93
Shares issued for cash on exercise of stock options (note 11(b))	17	-	-	17
Stock-based compensation:				
Current period expense (note 11(c))	-	597	-	597
Stock options exercised (note 11(b))	3	(3)	-	-
<b>Balance, September 30, 2018</b>	<b>79,711</b>	<b>12,369</b>	<b>(42,040)</b>	<b>50,040</b>

\* The Company adopted IFRS 15 effective April 1, 2018 using the cumulative effect method. Under this method, comparative information is not restated. See note 3.

See accompanying notes to condensed consolidated interim financial statements.

## Condensed Consolidated Statements of Cash Flows

UNAUDITED (thousands of Canadian \$)	Three months ended September 30		Six months ended September 30	
	2018	2017*	2018	2017*
<b>Operating activities</b>				
Net income	5,056	4,606	9,314	9,563
Adjustments for:				
Depreciation	481	475	944	944
Income and other taxes (note 10)	2,048	1,647	3,770	3,620
Stock-based compensation (note 11(c))	(29)	530	732	994
Interest income (note 9)	(312)	(218)	(615)	(420)
Deferred rent (note 5)	106	347	212	1,175
	7,350	7,387	14,357	15,876
Changes in non-cash working capital:				
Trade and other receivables	403	(846)	6,170	13,882
Trade payables and accrued liabilities	577	112	(1,193)	(1,722)
Prepaid expenses	13	(307)	141	(1,037)
Deferred revenue	(6,128)	(7,865)	(10,455)	(14,546)
Cash provided by (used in) operating activities	2,215	(1,519)	9,020	12,453
Interest received	324	219	626	417
Income taxes paid	(2,262)	(2,727)	(4,653)	(5,765)
<b>Net cash provided by (used in) operating activities</b>	<b>277</b>	<b>(4,027)</b>	<b>4,993</b>	<b>7,105</b>
<b>Financing activities</b>				
Proceeds from issue of common shares	17	2,540	17	6,664
Dividends paid	(8,024)	(8,021)	(16,045)	(15,998)
<b>Net cash used in financing activities</b>	<b>(8,007)</b>	<b>(5,481)</b>	<b>(16,028)</b>	<b>(9,334)</b>
<b>Investing activities</b>				
Property and equipment additions	(80)	(416)	(413)	(3,662)
<b>Decrease in cash</b>	<b>(7,810)</b>	<b>(9,924)</b>	<b>(11,448)</b>	<b>(5,891)</b>
Cash, beginning of period	60,081	67,272	63,719	63,239
<b>Cash, end of period</b>	<b>52,271</b>	<b>57,348</b>	<b>52,271</b>	<b>57,348</b>

\* The Company adopted IFRS 15 effective April 1, 2018 using the cumulative effect method. Under this method, comparative information is not restated. See note 3.

See accompanying notes to condensed consolidated interim financial statements.



# Notes to Condensed Consolidated Financial Statements

For the three and six months ended September 30, 2018 and 2017 (unaudited).

## 1. Reporting Entity:

Computer Modelling Group Ltd. ("CMG") is a company domiciled in Alberta, Canada and is incorporated pursuant to the Alberta Business Corporations Act, with its Common Shares listed on the Toronto Stock Exchange under the symbol "CMG". The address of CMG's registered office is 3710 33 Street N.W., Calgary, Alberta, Canada, T2L 2M1. The condensed consolidated interim financial statements as at and for the three and six months ended September 30, 2018 comprise CMG and its subsidiaries (together referred to as the "Company"). The Company is a computer software technology company engaged in the development and licensing of reservoir simulation software. The Company also provides professional services consisting of highly specialized support, consulting, training, and contract research activities.

## 2. Basis of Preparation:

### (a) Statement of Compliance:

These condensed consolidated financial statements have been prepared in accordance with International Accounting Standard ("IAS") 34 *Interim Financial Reporting*. Accordingly, they do not include all of the information required for full annual financial statements and should be read in conjunction with the Company's most recent annual consolidated financial statements as at and for the year ended March 31, 2018, which have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB").

The Company has adopted IFRS 15 *Revenue from Contracts with Customers* effective April 1, 2018. Changes to significant accounting policies are described in note 3.

These unaudited condensed consolidated interim financial statements as at and for the three and six months ended September 30, 2018 were authorized for issuance by the Board of Directors on November 13, 2018.

### (b) Basis of Measurement:

The condensed consolidated financial statements have been prepared on the historical cost basis, which is based on the fair value of the consideration at the time of the transaction.

### (c) Functional and Presentation Currency:

The condensed consolidated financial statements are presented in Canadian dollars, which is the functional currency of CMG and its subsidiaries. All financial information presented in Canadian dollars has been rounded to the nearest thousand.

### (d) Use of Estimates, Judgments and Assumptions:

The preparation of financial statements in conformity with IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies, the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue, costs and expenses for the period. Estimates and underlying assumptions are based on historical experience and other assumptions that are considered reasonable in the circumstances and are reviewed on an on-going basis. Actual results may differ from such estimates and it is possible that the differences could be material. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

## 3. Changes in Significant Accounting Policies:

Except as described below, the accounting policies applied in these condensed consolidated interim financial statements are the same as those applied in the Company's consolidated financial statements as at and for the year ended March 31, 2018.

### IFRS 9 *Financial Instruments*

Effective April 1, 2018, the Company adopted IFRS 9 *Financial Instruments*, which sets out requirements for recognizing and measuring financial assets, financial liabilities and some contracts to buy or sell non-financial items. This standard replaces *IAS 39 Financial Instruments: Recognition and Measurement*.

IFRS 9 largely retains the existing requirements in IAS 39 for the classification and measurement of financial liabilities. However, it eliminates the previous IAS 39 categories for financial assets of held to maturity, loans and receivables and available for sale. Under IFRS 9, a financial asset is classified as measured at:

- Amortized cost;
- Fair Value through Other Comprehensive Income (“FVOCI”) – debt investment;
- FVOCI – equity investment;
- Fair Value through Profit or Loss.

The classification of financial assets under IFRS 9 is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics. Impairment of financial assets under IFRS 9 is based on an expected credit loss (“ECL”) model, rather than the incurred loss model under IAS 39. ECLs are a probability-weighted estimate of credit losses. The new impairment model applies to financial assets measured at amortized cost, contract assets and debt investments at FVOCI, but not to investment in equity instruments. Under IFRS 9, credit losses are recognized earlier than under IAS 39. There is no impact to CMG’s consolidated financial statements, as the Company’s credit losses have historically been low because most of its customers are large oil and gas companies with strong credit.

The following table shows the original measurement categories under IAS 39 and the new measurement categories under IFRS 9 for each class of the Company’s financial assets as at April 1, 2018:

Financial assets	IAS 39		IFRS 9	
	Classification	Measurement	Classification	Measurement
Cash	Loans and receivables	Amortized cost	Amortized cost	Amortized cost
Trade and other receivables	Loans and receivables	Amortized cost	Amortized cost	Amortized cost

The adoption of IFRS 9 did not have a material impact on the Company’s consolidated financial statements.

### IFRS 15 *Revenue from Contracts with Customers*

On April 1, 2018, the Company adopted IFRS 15 *Revenue from Contracts with Customers*. IFRS 15 superseded previous accounting standards for revenue, including IAS 18 *Revenue* and related interpretations. IFRS 15 introduced a single model for recognizing revenue from contracts with customers. The model specifies that revenue is recognized when or as the Company transfers control of promised goods or services to a customer at the amount to which the Company expects to be entitled. Depending on certain criteria, revenue is recognized over time or at a point in time.

The details of the new significant accounting policies and the nature of the changes to previous accounting policies related to the Company’s various revenue streams are set out below:

Type of products /service	Nature, timing of satisfaction of performance obligations, significant contract terms	Change in accounting policy and impact
Annuity license revenue	<p>Annuity agreements include a term-based software license bundled with maintenance. IFRS 15 requires that the portion of the annuity agreement fee that relates to the software license should be recognized as revenue at the start of the license period, while the remainder should be recognized as maintenance revenue on a straight-line basis over the license period. However, since it is management’s practice to honour customers’ mid-contract requests to reduce product quantities or license term duration without a penalty and refund or credit a pro-rata share of the agreement fee, annuity license revenue cannot be recognized upfront and will instead be recognized ratably over the term of the contract.</p> <p>The exception to this practice is certain multi-year agreements with very specific termination clauses that significantly limit the customer’s ability to reduce the license term, in which case the software license portion that relates to the non-</p>	<p>Under IAS 18, the revenue attributable to these software licenses was recognized on a straight-line basis over the license period. As such, revenue recognition on the majority of our annuity agreements will not change.</p> <p>The only exception are</p>

cancellable period will be recognized upfront, at the start of that particular period of the license contract.

The maintenance component of an annuity contract includes customer support and unspecified software upgrades. Maintenance license revenue is recognized on a straight-line basis over the term of the contract, as the Company satisfies its maintenance performance obligation over time.

Since the Company does not sell term-based annuity licenses individually without maintenance and there is no comparable product in the market, there is no observable standalone selling price for term-based annuity licenses. The Company allocates the value of bundled annuity agreements between software licenses and maintenance using the residual approach, by subtracting the standalone selling price of a maintenance license from the total annuity agreement fee. Based on this calculation, the standalone selling price of a maintenance license represents 45% of the total annuity agreement fee, leaving 55% to be allocated to the stand-alone annuity license.

certain multi-year agreements with very specific termination clauses that significantly limit the customer's ability to reduce the license term. Under IAS 18, revenue was recognized on a straight-line basis over the license period. Under IFRS 15, the transaction price allocated to the software license is recognized upfront, at the start of the license period.

Maintenance license revenue	Maintenance agreements include customer support and unspecified software upgrades, typically for a term of one year or less. Maintenance licenses are purchased by customers who already own a perpetual license and want the additional benefit of customer support and software upgrades. Maintenance license revenue is recognized on a straight-line basis over the term of the contract, as the Company satisfies its maintenance performance obligation over time.	IFRS 15 did not have a significant impact on accounting for maintenance revenue.
Perpetual license revenue	A perpetual license grants the customer the right to use the then-current version of the software in perpetuity. Perpetual license revenue is recognized at a point in time, upon delivery of the licensed product.	IFRS 15 did not have a significant impact on accounting for perpetual licenses.
Professional services revenue	Revenue from professional services consists of consulting, training and contract research activities. Professional services revenue is recognized over time, based on hours incurred.	IFRS 15 did not have a significant impact on accounting for consulting services.

The Company has adopted IFRS 15 using the cumulative effect method, by recognizing the cumulative effect of initially applying IFRS 15 as an adjustment to the opening balance of equity at April 1, 2018. The Company recorded an increase to retained earnings of \$0.7 million (\$0.5 million net of tax) on April 1, 2018, due to the impact of certain term-based software licenses, as explained in the table above. Under the cumulative effect method, comparative information is not restated and continues to be reported under IAS 18 *Revenue*.

The Company applies the practical expedient available under IFRS 15 and does not capitalize incremental costs of obtaining contracts if the amortization period is one year or less.

The following tables summarize the impact of adopting IFRS 15 on the Company's condensed consolidated interim financial statements for the three and six months ended September 30, 2018:

### Consolidated Statement of Operations and Comprehensive Income

(thousands of \$)	As reported	Adjustments	Balance without adoption of IFRS 15
Revenue	17,941	229	18,170
Income and other taxes	(2,048)	(62)	(2,110)
Other	(10,837)	-	(10,837)
<b>Net and total comprehensive income</b>	<b>5,056</b>	<b>167</b>	<b>5,223</b>

Six months ended September 30, 2018 (thousands of \$)	As reported	Adjustments	Balance without adoption of IFRS 15
Revenue	34,646	456	35,102
Income and other taxes	(3,770)	(123)	(3,893)
Other	(21,562)	-	(21,562)
<b>Net and total comprehensive income</b>	<b>9,314</b>	<b>333</b>	<b>9,647</b>

#### Consolidated Statement of Financial Position

September 30, 2018 (thousands of \$)	As reported	Adjustments	Balance without adoption of IFRS 15
Prepaid income taxes	387	62	449
Other	79,534	-	79,534
<b>Total assets</b>	<b>79,921</b>	<b>62</b>	<b>79,983</b>
Deferred revenue (current and long-term)	(23,222)	(229)	(23,451)
Other	(6,659)	-	(6,659)
<b>Total liabilities</b>	<b>(29,881)</b>	<b>(229)</b>	<b>(30,110)</b>
Deficit	42,040	167	42,207
Other	(92,080)	-	(92,080)
<b>Total shareholders' equity</b>	<b>(50,040)</b>	<b>167</b>	<b>(49,873)</b>

The adoption of IFRS 15 had no impact on the Company's cash flows from operating activities. However, with the adoption of IFRS 15, there will be an acceleration of income tax payments associated with deferred revenue credited to opening retained earnings on April 1, 2018 and never recognized as revenue in the financial statements. The fiscal 2019 tax payments related to the adoption of IFRS 15 are estimated to be \$0.2 million.

#### 4. Segmented Information:

The Company is organized into one operating segment represented by the development and licensing of reservoir simulation software. The Company provides professional services, consisting of support, training, consulting and contract research activities, to promote the use and development of its software; however, these activities are not evaluated as a separate business segment.

Property and equipment of the Company is located in the following geographic regions (for revenue by geographic region, refer to note 7):

(thousands of \$)	September 30, 2018	March 31, 2018
Canada	14,828	15,733
United States	176	143
South America	105	136
Eastern Hemisphere <sup>(1)</sup>	72	50
	<b>15,181</b>	<b>16,062</b>

(1) Includes Europe, Africa, Asia and Australia.

#### 5. Deferred Rent Liability:

The twenty-year lease agreement for the Company's headquarters, which commenced in fiscal 2018, contains a rent escalation clause. The Company recognizes rent expense on a straight-line basis over the lease term, in accordance with IFRS. The difference between rent expense and rent payable for the period is recorded as deferred rent within long-term liabilities in the consolidated statement of financial position.

## 6. Deferred Revenue:

The following table presents changes in the deferred revenue balance for the six months ended September 30, 2018:

(thousands of \$)	
Balance, March 31, 2018	34,362
Adjustment on initial application of IFRS 15	(685)
Adjusted balance, April 1, 2018	33,677
Invoiced during the period, excluding amount recognized as revenue during the period	11,424
Recognition of deferred revenue included in the adjusted balance at the beginning of the period	(21,879)
Balance, September 30, 2018	23,222
Current	22,940
Long-term	282

## 7. Revenue:

In the following table, revenue is disaggregated by geographical segment and timing of revenue recognition:

(thousands of \$)	Three months ended September 30		Six months ended September 30	
	2018	2017	2018	2017
<b>Annuity/maintenance license revenue</b>				
Canada	3,792	4,462	7,659	8,626
United States	4,626	4,466	9,179	9,057
South America	1,732	2,412	3,413	4,745
Eastern Hemisphere	4,961	5,001	9,575	10,429
	15,111	16,341	29,826	32,857
<b>Perpetual license revenue</b>				
Canada	156	-	156	-
United States	152	129	152	155
South America	-	62	-	220
Eastern Hemisphere	864	99	1,190	993
	1,172	290	1,498	1,368
<b>Total software license revenue</b>	16,283	16,631	31,324	34,225
<b>Professional services</b>				
Canada	1,066	1,005	2,153	2,030
United States	131	218	287	354
South America	189	31	359	67
Eastern Hemisphere	272	96	523	291
	1,658	1,350	3,322	2,742
<b>Total revenue</b>				
Canada	5,014	5,467	9,968	10,656
United States	4,909	4,813	9,618	9,566
South America	1,921	2,505	3,772	5,032
Eastern Hemisphere	6,097	5,196	11,288	11,713
	17,941	17,981	34,646	36,967

The amount of revenue recognized during the three and six months ended September 30, 2018 from performance obligations satisfied (or partially satisfied) in previous periods is \$0.6 million and \$0.8 million, respectively.

The Company applies the practical expedient available under IFRS 15 and does not disclose the amount of the transaction price allocated to unsatisfied performance obligations if the underlying contract has an expected duration of one year or less.

Receivables from contracts with customers were as follows:

(thousands of \$)	September 30, 2018	April 1, 2018
Receivables (included in "Trade and other receivables")	8,816	15,459

In the six months ended September 30, 2018, no customer comprised more than 10% of the Company's total revenue (September 30, 2017 – one customer, 10.8%).

## 8. Research and Development Costs:

Three months ended September 30, (thousands of \$)	2018	2017
Research and development	5,239	5,303
Scientific research and experimental development ("SR&ED") investment tax credits	(377)	(438)
	4,862	4,865

Six months ended September 30, (thousands of \$)	2018	2017
Research and development	10,424	11,065
Scientific research and experimental development ("SR&ED") investment tax credits	(787)	(893)
	9,637	10,172

## 9. Finance Income and Finance Costs:

Three months ended September 30, (thousands of \$)	2018	2017
Interest income	312	218
Finance income	312	218
Net foreign exchange loss	(232)	(580)
Finance costs	(232)	(580)

Six months ended September 30, (thousands of \$)	2018	2017
Interest income	615	420
Net foreign exchange gain	71	-
Finance income	686	420
Net foreign exchange loss	-	(830)
Finance costs	-	(830)

## 10. Income and Other Taxes:

The major components of income tax expense are as follows:

Six months ended September 30, (thousands of \$)	2018	2017
Current year income taxes	3,857	4,276
Adjustment for prior year	8	(78)
Current income taxes	3,865	4,198
Deferred tax recovery	(183)	(683)
Foreign withholding and other taxes	88	105
	3,770	3,620

The provision for income and other taxes reported differs from the amount computed by applying the combined Canadian Federal and Provincial statutory rate to the profit before income and other taxes. The reasons for this difference and the related tax effects are as follows:

Six months ended September 30, (thousands of \$, unless otherwise stated)	2018	2017
Combined statutory tax rate	27.00%	27.00%
Expected income tax	3,533	3,559
Non-deductible costs	226	276
Effect of tax rates in foreign jurisdictions	(3)	11
Withholding taxes	27	-
Adjustment for prior year	8	(207)
Other	(21)	(19)
	3,770	3,620

The components of the Company's deferred tax asset are as follows:

(thousands of \$)	September 30, 2018	March 31, 2018
SR&ED investment tax credits	(122)	(270)
Property and equipment	179	187
Deferred rent	432	375
Stock-based compensation liability	215	230
Net deferred tax asset	704	522

All movement in deferred tax assets and liabilities is recognized through net income of the respective period.

Prepaid income taxes and current income taxes payable have not been offset as the amounts relate to income taxes levied by different tax authorities on different taxable entities.

## 11. Share Capital:

### (a) Authorized:

An unlimited number of Common Shares, an unlimited number of Non-Voting Shares, and an unlimited number of Preferred Shares, issuable in series.

**(b) Issued:**

(thousands of shares)	Common Shares
Balance, April 1, 2017	79,482
Issued for cash on exercise of stock options	733
Balance, September 30, 2017	80,215
Balance, April 1, 2018	<b>80,215</b>
Issued on redemption of restricted share units	<b>10</b>
Issued for cash on exercise of stock options	<b>2</b>
<b>Balance, September 30, 2018</b>	<b>80,227</b>

On May 23, 2018, the Board of Directors considered the merits of renewing the Company's shareholder rights plan on or before the third-year anniversary of shareholder approval of the plan and determined that it was in the best interest of the Company to continue to have a shareholder rights plan in place. Upon careful review, the Board of Directors agreed to approve an amended and restated rights plan (the "Amended and Restated Rights Plan") between the Company and Computershare Trust Company of Canada. The Amended and Restated Rights Plan is similar in all respects to the existing shareholder rights plan, with the exception of certain minor amendments. The Amended and Restated Rights Plan was approved by the Company's shareholders on July 12, 2018.

**(c) Stock-Based Compensation:**

**Stock-Based Compensation Expense**

The following table summarizes stock-based compensation expense:

Three months ended September 30, (thousands of \$)	2018	2017
Equity-settled plans	264	376
Cash-settled plans	(69)	154
Total stock-based compensation expense	195	530
Six months ended September 30, (thousands of \$)	2018	2017
Equity-settled plans	597	786
Cash-settled plans	359	208
Total stock-based compensation expense	956	994

**Liability Recognized for Stock-Based Compensation <sup>(1)</sup>**

The following table summarizes liabilities for the Company's cash-settled plans, recorded within trade payables and accrued liabilities:

(thousands of \$)	September 30, 2018	March 31, 2018
SARs	330	375
RSUs	368	376
DSUs	194	99
Total stock-based compensation liability	892	850

(1) The intrinsic value of the vested awards at September 30, 2018 was \$0.2 million.

The Company has several stock-based compensation plans, including a stock option plan, a share appreciation rights plan, a performance share unit and restricted share unit plan, and a deferred share unit plan.



The maximum number of Common Shares reserved for issuance under the Company's security-based compensation plans is limited to 10% of the issued and outstanding Common Shares. Based on this calculation, at September 30, 2018, the Company may reserve up to 8,022,000 Common Shares for issuance under its security-based compensation plans.

(i) *Stock Option Plan*

The Company adopted a rolling stock option plan as of July 13, 2005, which was reaffirmed by the Company's shareholders on July 13, 2017. Pursuant to the stock option plan, the maximum term of an option granted cannot exceed five years from the date of grant. The outstanding stock options vest as to 50% after the first year anniversary from the date of grant and then vest as to 25% of the total options granted after each of the second and third year anniversary dates.

The following table outlines changes in stock options:

	Six months ended September 30, 2018		Year ended March 31, 2018	
	Number of Options (thousands)	Weighted Average Exercise Price (\$/share)	Number of Options (thousands)	Weighted Average Exercise Price (\$/share)
Outstanding at beginning of period	6,787	11.78	7,204	11.69
Granted	507	9.20	910	9.33
Exercised	(2)	9.78	(733)	9.09
Forfeited/expired	(2,095)	12.17	(594)	10.27
Outstanding at end of period	5,197	11.37	6,787	11.78
Options exercisable at end of period	4,063	11.93	4,063	11.93

The range of exercise prices of stock options outstanding and exercisable at September 30, 2018 is as follows:

Exercise Price (\$/option)	Outstanding			Exercisable	
	Number of Options (thousands)	Weighted Average Remaining Contractual Life (years)	Weighted Average Exercise Price (\$/option)	Number of Options (thousands)	Weighted Average Exercise Price (\$/option)
8.96 to 9.20	503	4.9	9.20	2	8.96
9.21 to 9.33	869	3.9	9.33	439	9.33
9.34 to 9.78	812	2.9	9.78	612	9.78
9.79 to 12.31	1,128	1.9	12.28	1,125	12.29
12.32 to 14.97	1,885	0.9	13.03	1,885	13.03
	5,197	2.3	11.37	4,063	11.93

The fair value of stock options granted was estimated using the Black-Scholes option pricing model under the following assumptions:

	Six months ended September 30, 2018	Year ended March 31, 2018
Fair value at grant date (\$/option)	1.50 to 1.63	1.46 to 1.47
Share price at grant date (\$/share)	9.20	9.33
Risk-free interest rate (%)	2.13 to 2.17	1.26 to 1.37
Estimated hold period prior to exercise (years)	3 to 4	3 to 4
Volatility in the price of common shares (%)	30 to 31	29 to 31
Dividend yield per common share (%)	4.33	4.31

(ii) *Share Appreciation Rights Plan*

The Company adopted a share appreciation rights plan (“SAR Plan”) in November 2015. A share appreciation right (“SAR”) entitles the holder to receive a cash payment equal to the difference between the stated exercise price and the market price of the Company’s Common Shares on the date the SAR is exercised. The SARs are granted to executive officers and employees residing and working outside of Canada. The outstanding SARs vest as to 50% after the first year anniversary from date of grant and then vest as to 25% of the total awards granted after each of the second and third year anniversary dates. The SARs have a five-year life.

The following table outlines changes in SARs:

	Six months ended September 30, 2018		Year ended March 31, 2018	
	Number of SARs (thousands)	Weighted Average Exercise Price (\$/SAR)	Number of SARs (thousands)	Weighted Average Exercise Price (\$/SAR)
Outstanding at beginning of period	583	9.50	222	9.78
Granted	389	9.20	365	9.33
Exercised	-	-	(4)	9.78
Forfeited	-	-	-	-
Outstanding at end of period	972	9.38	583	9.50
SARs exercisable at end of period	345	9.54	107	9.78

(iii) *Share Unit Plans*

**Restricted Share Units (RSUs)**

RSUs are granted under the Performance Share Unit and Restricted Share Unit Plan, which was adopted in July 2017 and is open to all employees and contractors of the Company. RSUs vest annually over a three-year period. Upon vesting, an RSU can be exchanged for a Common Share of the Company or surrendered for cash. As such, the Company accounts for RSUs as cash-settled awards and recognizes a liability for potential cash settlements.

**Deferred Share Units (DSUs)**

The DSU Plan was adopted in May 2017 and is limited to members of the Board of Directors. DSUs vest immediately, but are redeemable for cash only after a director ceases Board membership.

The following table summarizes the activity related to the Company’s share unit plans:

(thousands)	Six months ended September 30, 2018		Year ended March 31, 2018	
	RSUs	DSUs	RSUs	DSUs
Outstanding at beginning of period	108	11	-	-
Granted	165	12	111	11
Redeemed	(36)	-	-	-
Forfeited	(3)	-	(3)	-
Outstanding at end of period	234	23	108	11

**(d) Earnings Per Share:**

The following table summarizes the earnings and weighted average number of Common Shares used in calculating basic and diluted earnings per share:

Three months ended September 30, (thousands except per share amounts)	2018			2017		
	Earnings (\$)	Weighted Average Shares Outstanding	Earnings Per Share (\$/share)	Earnings (\$)	Weighted Average Shares Outstanding	Earnings Per Share (\$/share)
Basic	5,056	80,221	0.06	4,606	80,117	0.06
Dilutive effect of stock options		72			23	
Diluted	5,056	80,293	0.06	4,606	80,140	0.06

Six months ended September 30, (thousands except per share amounts)	2018			2017		
	Earnings (\$)	Weighted Average Shares Outstanding	Earnings Per Share (\$/share)	Earnings (\$)	Weighted Average Shares Outstanding	Earnings Per Share (\$/share)
Basic	9,314	80,218	0.12	9,563	79,878	0.12
Dilutive effect of stock options		71			64	
Diluted	9,314	80,289	0.12	9,563	79,942	0.12

During the three and six months ended September 30, 2018, 74,000 and 219,000 awards, respectively (three and six months ended September 30, 2017 – 185,000 and 194,000 options, respectively), were excluded from the computation of the weighted average number of diluted shares outstanding because their effect was not dilutive.

**12. Financial Instruments:**

Financial assets include cash and trade and other receivables which are classified as and measured at amortized cost, which approximates their fair values.

Financial liabilities include trade payables and accrued liabilities which are classified as other financial liabilities and are measured at amortized cost, which approximates their fair values.

**13. Commitments:****(a) Research Commitments:**

CMG, in partnership with Shell Global Solutions International B.V. ("Shell"), is the developer of CoFlow, the newest generation of reservoir and production system simulation software. Under a five-year agreement entered into by Shell and CMG on January 1, 2017, CMG is responsible for the research and development costs of CoFlow, while Shell provides a fixed fee contribution for the continuing development of the software. The Company's revenue and costs associated with CoFlow are estimated to be \$4.0 million and \$7.7 million, respectively, in fiscal 2019.

**(b) Lease Commitments:**

The Company has operating lease commitments relating to its office premises with the minimum annual lease payments as follows:

As at September 30, (thousands of \$)	2018	2017
Less than one year	4,586	4,837
Between one and five years	18,374	19,133
More than five years	69,883	78,615
	<b>92,843</b>	102,585

**14. Line Of Credit:**

The Company has arranged for a \$2.0 million line of credit with its principal banker, which can be drawn down by way of a demand operating credit facility or may be used to support letters of credit. As at September 30, 2018, \$1.2 million (September 30, 2017 – \$0.3 million) had been reserved on this line of credit for letters of credit supporting performance bonds.

**15. CoFlow Project:**

During the three and six months ended September 30, 2018, CoFlow revenue of \$1.0 million and \$2.0 million, respectively, was recorded to professional services revenue (three and six months ended September 30, 2017 – \$1.0 million and \$2.0 million, respectively) and CoFlow costs of \$1.9 million and \$3.8 million, respectively, were recorded to research and development expenses (three and six months ended September 30, 2017 – \$1.9 million and \$3.9 million, respectively).

**16. Subsequent Event:**

On November 13, 2018, the Board of Directors declared a quarterly cash dividend of \$0.10 per share on its Common Shares, payable on December 14, 2018 to all shareholders of record at the close of business on December 6, 2018.

# CORPORATE INFORMATION

## Directors

**Judith J. Athaide** <sup>(4)</sup>

**Kenneth M. Dedeluk** <sup>(5)</sup>

**Christopher L. Fong** <sup>(2)</sup>

**Patrick R. Jamieson** <sup>(3)</sup>

**Peter H. Kinash** <sup>(2) (4)</sup>

**Ryan N. Schneider**

**Robert F. M. Smith** <sup>(1)</sup>

**John B. Zaozirny**

*Chairman of the Board*

- (1) Chair, Audit Committee
- (2) Member, Audit Committee
- (3) Chair, Governance Committee
- (4) Member, Governance Committee
- (5) Vice Chairman of the Board

## Officers

**Ryan N. Schneider**

*President and Chief Executive Officer*

**Sandra Balic**

*Vice President,  
Finance and Chief Financial Officer*

**Robert R. Eastick**

*Vice President,  
CoFlow*

**Jim C. Erdle**

*Vice President,  
USA & Latin America*

**R. David Hicks**

*Vice President,  
Eastern Hemisphere*

**Anjani Kumar**

*Vice President,  
Engineering Solutions and Marketing*

**Long X. Nghiem**

*Vice President,  
Research & Development*

**Kathy L. Krug**

*Corporate Secretary*

## Head Office

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Website: [www.cmgl.ca](http://www.cmgl.ca)

## Regional Offices

Bogota, Colombia  
Dubai, UAE  
Houston, Texas, USA  
Kuala Lumpur, Malaysia  
London, England  
Rio de Janeiro, Brazil

## Transfer Agent

Computershare Trust Company of  
Canada

## Stock Exchange Listing

Toronto Stock Exchange: **CMG**