



Advanced Emissions Solutions, Inc.

Advancing Cleaner Energy

Second Quarter 2021 Earnings Results Call

August 10, 2021





SAFE HARBOR

This presentation includes forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, which provides a "safe harbor" for such statements in certain circumstances. The forward-looking statements include statements or expectations regarding net, after-tax cash flows from refined coal ("RC"); expectations of continued APT performance improvement; our success in executing our 2021 priorities and results from the Company's review of strategic alternatives. These statements are based on current expectations, estimates, projections, beliefs and assumptions of our management. Such statements involve significant risks and uncertainties. Actual events or results could differ materially from those discussed in the forward-looking statements as a result of various factors, including but not limited to, the outcome of the review of strategic alternatives, our ability to meet customer supply requirements, the rate of coal-fired power generation in the United States; changes and timing in laws, regulations, IRS interpretations or guidance, and accounting rules; changes in prices, economic conditions and market demand; impact of competition; technical, start-up and operational difficulties; availability of raw materials; customer demand for our APT products; competition within the industries in which we operate; availability of opportunities to further grow our business; loss of key personnel; ongoing effects of the COVID-19 pandemic and associated economic downturn on our operations and prospects; and other factors discussed in greater detail in our filings with the SEC. You are cautioned not to place undue reliance on such statements and to consult our SEC filings for additional risks and uncertainties that may apply to our business and the ownership of our securities. Our forward-looking statements are presented as of the date made, and we disclaim any duty to update such statements unless required by law to do so.

SECOND QUARTER 2021 BUSINESS SUMMARY



Refined Coal ("RC")

- Q2 distributions were \$20.6M compared to \$15.4M
- Q2 royalties were \$3.7M compared to \$3.3M
- Q2 segment operating income was \$24.9M compared to \$10.8M
- Q2 Segment Adjusted EBITDA⁽¹⁾ was \$24.1M compared to \$18.1M



Advanced Purification Technologies ("APT")

- Q2 revenue was \$16.0M compared to \$8.2M; Q2 gross profit was \$2.7M compared to \$0.8M
- Q2 segment operating income totaled \$0.3M compared to segment operating loss of \$30.0M
- Q2 Segment Adjusted EBITDA⁽¹⁾ of \$0.3M compared to a segment EBITDA loss of \$2.3M
- Significant embedded growth drivers



Consolidated Results & Capital Allocation

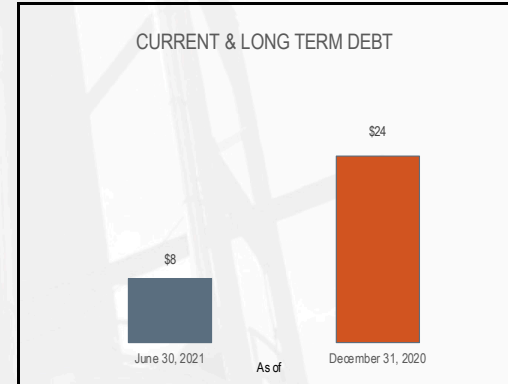
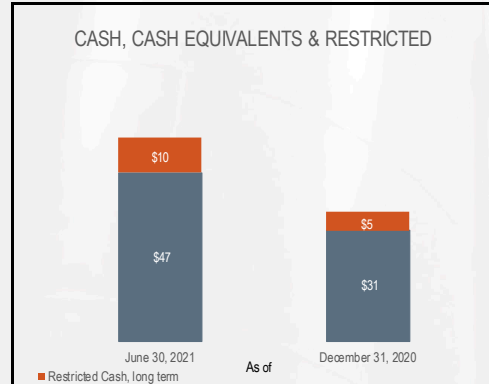
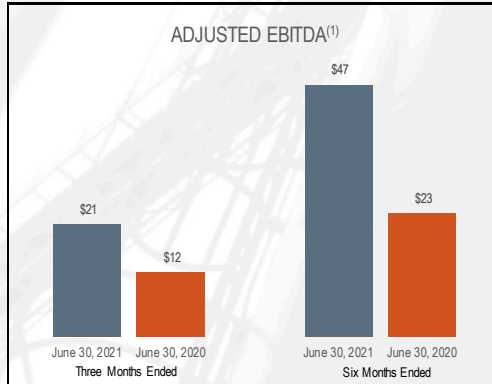
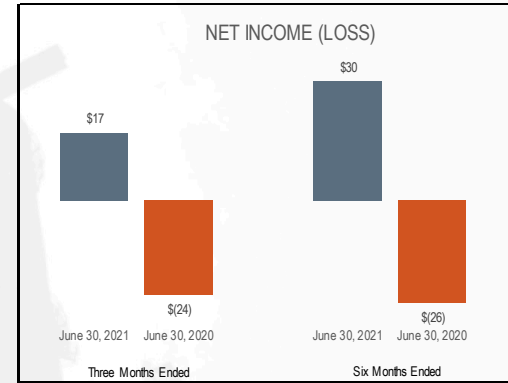
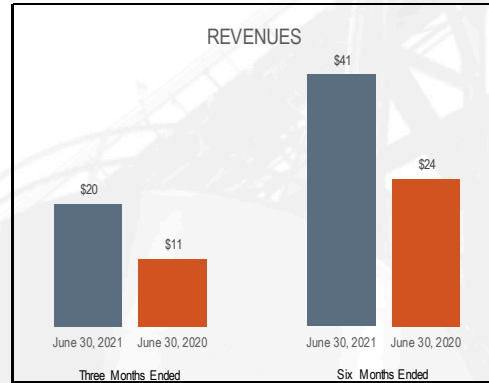
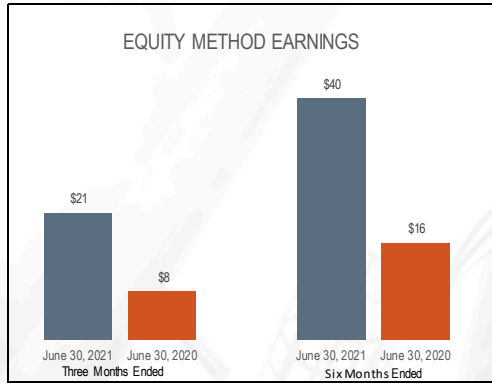
- Q2 net income of \$16.6M compared to a net loss of \$23.8M
- Q2 consolidated Adjusted EBITDA⁽²⁾ of \$21.2M compared to \$12.3M
- Reduced term-loan balance by \$6.0M to zero, completing repayment of term-loan
- Cash, including restricted cash, of \$57.3M compared to \$35.9M as of December 31, 2020



Outlook

- Net, after-tax cash flows from RC segment projected to be between \$30M to \$40M
- Expect continued top-line growth in the APT segment in 2021
- Due to strong demand, continuing to monitor and address inventory levels
- Strategic alternatives review underway and progressing

FINANCIAL HIGHLIGHTS

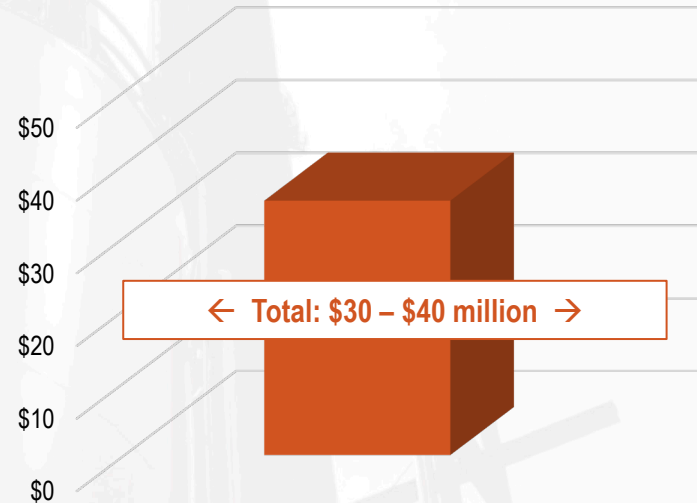


(1) Adjusted EBITDA is a non-GAAP measure. See Appendix for definitions and reconciliations.

EXPECTED FUTURE REFINED COAL (“RC”) CASH FLOWS

- Based on 22 invested facilities as of June 30, 2021 and includes all net RC cash flows of ADES ⁽¹⁾
- Expected future net RC cash flows of \$30 million to \$40 million to ADES in total ⁽²⁾
- Absent an extension to the scheduled tax credit expiration on December 31, 2021, which is not expected, Tinuum does not anticipate to have any additional facility transactions; the remaining 22 facilities Section 45 tax credit generation period will expire by the end of the year

EXPECTED FUTURE CASH FLOWS FROM RC BUSINESS ⁽¹⁾ *(in millions)*



(1) Net projected RC cash flows include the impact of all expected Tinuum distributions and royalty payments offset by the Company's federal and state tax payments as well as 453A interest payments

(2) The expectation is based on the following four key assumptions: 1) Tinuum Group continues to not operate retained facilities; 2) Tinuum Group does not have material unexpected CapEx or unusual operating expenses based on expectations as of the balance sheet date; 3) tax equity lease renewals are not terminated or repriced; and 4) coal-fired generation remains consistent with contractual expectations



APT SEGMENT GROWTH OPPORTUNITIES

Mercury Removal

Became provider-of-choice in mercury removal for coal-fired power generation immediately upon acquiring ADA Carbon Solutions and we leverage our existing IP, technologies and relationships to maintain our market position. However, this market remains structurally more challenged as aggregate coal burn is expected to decline over time.



Industrial Applications and Municipal Water

In response, we have developed a solid market position for certain Industrial applications and Municipal water – including markets that ADA Carbon Solutions did not previously serve.



Adjacent Markets

More specialized applications, offering higher margin and higher growth commercial market opportunities. The quality of Red River plant offers us the asset base to pursue these adjacent markets.



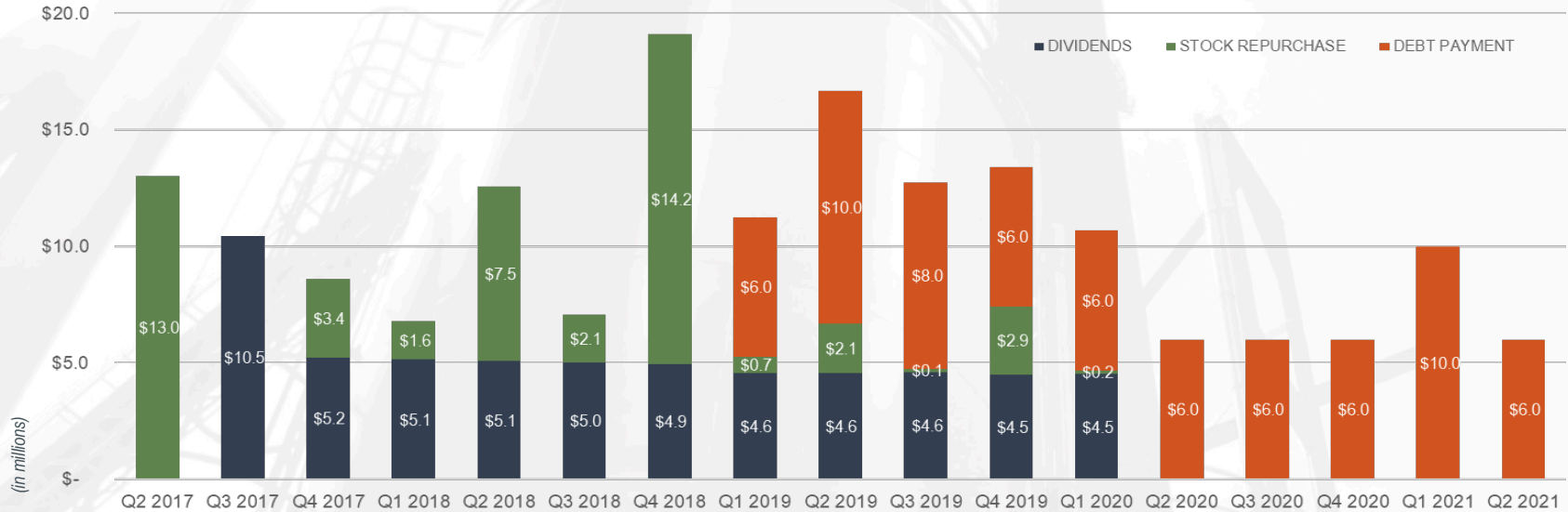
Provider of Choice

Premier provider of activated carbon and well-positioned to capitalize on emerging opportunities. Our projected volumes for 2021 are higher than any year since the acquisition of ADA Carbon Solutions, helped by the Cabot announcements, and we are selling into a more balanced mix of commercial markets.



CAPITAL ALLOCATION

- Company has returned \$106.4 million in dividends and share repurchases through the Capital Allocation program ⁽¹⁾, since inception
- Made final \$6.0 million principal payment on term loan together with accrued interest, reducing outstanding balance to zero as of June 30, 2021
- Near-term focus on investment in APT segment and shareholder value maximization via strategic alternatives process



(1) The Company started its current Capital Allocation program in the second quarter of 2017.



2021 PRIORITIES



OPTIMIZE REFINED COAL NET CASH FLOWS:

- Protect current forecasted cash flow stream to support capital allocation initiatives
- Maximize operational performance to produce RC and execute on plans for end of Tinnium businesses



FURTHER SCALE APT SEGMENT TO IMPROVE PROFITABILITY:

- Optimize Red River's capacity utilization to fully capture the low-cost benefit of the highly efficient plant
- Defend share in mercury control market while diversifying further into non-power generation markets to improve the earnings profile of the business
- Remain vigilant for additional rationalization opportunities and supply agreements
- Improved margin through customer and product mix



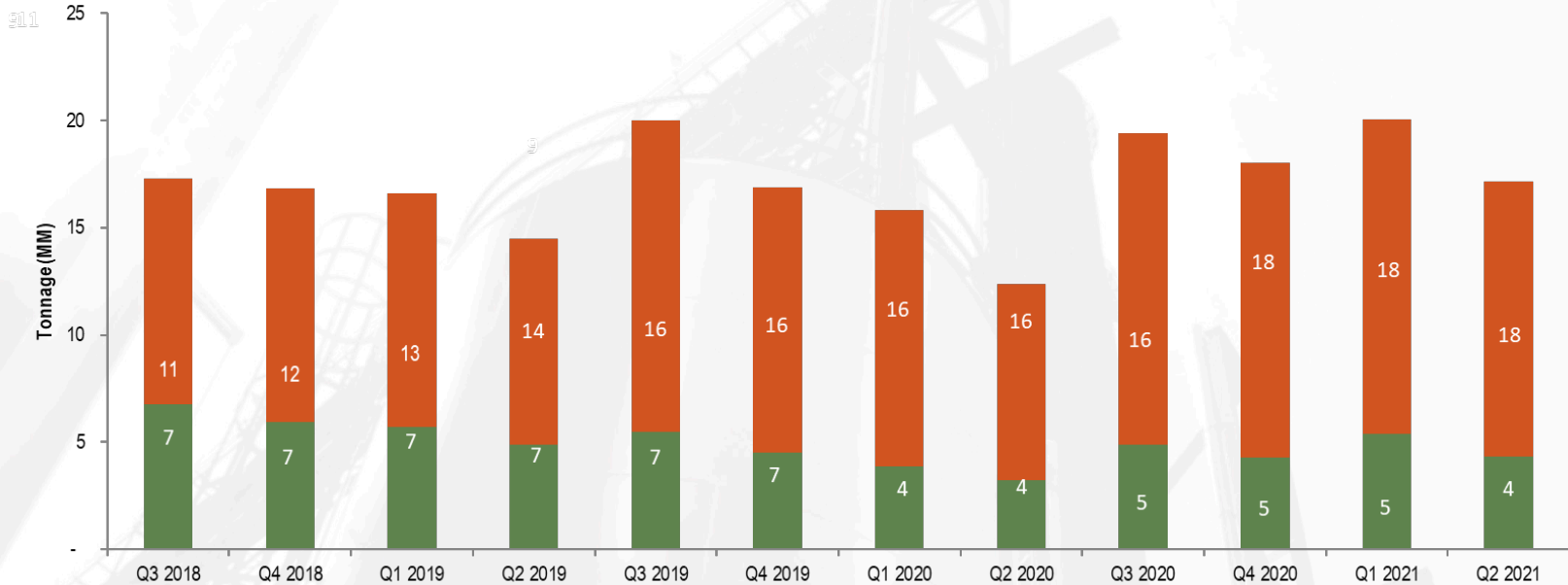
OPTIMIZE CASH FLOWS & ASSETS TO DRIVE SHAREHOLDER VALUE:

- Invest in APT segment's strategic initiatives to solidify position as provider-of-choice for activated carbon
- Execute strategic alternatives review to assess opportunities to maximize shareholder value



APPENDIX

Appendix A: Operating Tons: Royalty Vs. Non-royalty



Three Month Ended June 30, 2021	Operating Tons		QTD - Total
	Royalty	Non-Royalty	
Tonnage ⁽¹⁾	12,796	4,348	17,144
Count (#) ⁽²⁾	18	4	22

Six Months Ended June 30, 2021	Operating Tons		YTD - Total
	Royalty	Non-Royalty	
Tonnage ⁽¹⁾	27,459	9,746	37,205
Count (#) ⁽²⁾	18	4	22

Note: Numbers within bar graph represent the number of facilities per category as of the end of each quarter presented

(1) Tonnage information is based upon RC production for the three and six months ended June 30, 2021 (in thousands) (2) Counts are based upon the number of facilities of which a royalty has been earned during the period

Appendix B: 10-Q Balance Sheet⁽¹⁾

(in thousands, except share data)

	As of	
	June 30, 2021	December 31, 2020
ASSETS		
Current assets:		
Cash, cash equivalents and restricted cash	\$ 47,335	\$ 30,932
Receivables, net	11,560	13,125
Receivables, related parties	3,656	3,453
Inventories, net	8,161	9,882
Prepaid expenses and other assets	5,320	4,597
Total current assets	<u>76,032</u>	<u>61,989</u>
Restricted cash, long-term	10,000	5,000
Property, plant and equipment, net of accumulated depreciation of \$5,344 and \$3,340, respectively	31,204	29,433
Intangible assets, net	1,631	1,964
Equity method investments	3,564	7,692
Deferred tax assets, net	3,787	10,604
Other long-term assets, net	32,277	29,989
Total Assets	<u>\$ 158,495</u>	<u>\$ 146,671</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 8,162	\$ 7,849
Accrued payroll and related liabilities	2,660	3,257
Current portion of long-term debt	4,373	18,441
Other current liabilities	11,955	12,996
Total current liabilities	<u>27,150</u>	<u>42,543</u>
Long-term debt, net of current portion	3,670	5,445
Other long-term liabilities	11,392	13,473
Total Liabilities	<u>42,212</u>	<u>61,461</u>
Commitments and contingencies (Note 11)		
Stockholders' equity:		
Preferred stock: par value of \$.001 per share, 50,000,000 shares authorized, none outstanding	—	—
Common stock: par value of \$.001 per share, 100,000,000 shares authorized, 23,452,485 and 23,141,284 shares issued, and 18,834,339 and 18,523,138 shares outstanding at June 30, 2021 and December 31, 2020, respectively	23	23
Treasury stock, at cost: 4,618,146 and 4,618,146 shares as of June 30, 2021 and December 31, 2020, respectively	(47,692)	(47,692)
Additional paid-in capital	101,171	100,425
Retained earnings	62,781	32,454
Total stockholders' equity	<u>116,283</u>	<u>85,210</u>
Total Liabilities and Stockholders' Equity	<u>\$ 158,495</u>	<u>\$ 146,671</u>

(1) See complete, unaudited Condensed Consolidated Financial Statements and Notes related thereto within the Quarterly Report on Form 10-Q for the period ended June 30, 2021.

Appendix C: 10-Q Income Statement⁽¹⁾

<i>(in thousands, except per share data)</i>	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Revenues:				
Consumables	\$ 15,976	\$ 8,170	\$ 33,007	\$ 17,387
License royalties, related party	3,657	3,313	7,723	6,359
Total revenues	<u>19,633</u>	<u>11,483</u>	<u>40,730</u>	<u>23,746</u>
Operating expenses:				
Consumables cost of revenue, exclusive of depreciation and amortization	13,300	7,416	25,774	18,907
Payroll and benefits	2,908	3,812	5,377	6,554
Legal and professional fees	1,431	1,022	3,234	3,065
General and administrative	1,593	2,462	3,508	4,793
Depreciation, amortization, depletion and accretion	1,904	1,733	4,010	4,030
Impairment of long-lived assets	—	26,103	—	26,103
Gain on change in estimate, asset retirement obligation	(1,942)	—	(1,942)	—
Total operating expenses	<u>19,194</u>	<u>42,548</u>	<u>39,961</u>	<u>63,452</u>
Operating loss	<u>439</u>	<u>(31,065)</u>	<u>769</u>	<u>(39,706)</u>
Other income (expense):				
Earnings from equity method investments	21,437	8,168	39,749	16,441
Interest expense	(493)	(962)	(1,330)	(2,172)
Other	150	148	571	191
Total other income	<u>\$ 21,094</u>	<u>\$ 7,354</u>	<u>\$ 38,990</u>	<u>\$ 14,460</u>
Income (loss) before income tax expense	<u>21,533</u>	<u>(23,711)</u>	<u>39,759</u>	<u>(25,246)</u>
Income tax expense	4,943	103	9,432	461
Net income (loss)	<u>\$ 16,590</u>	<u>\$ (23,814)</u>	<u>\$ 30,327</u>	<u>\$ (25,707)</u>
Earnings (loss) per common share (Note 1):				
Basic	\$ 0.91	\$ (1.32)	\$ 1.66	\$ (1.43)
Diluted	\$ 0.90	\$ (1.32)	\$ 1.65	\$ (1.43)
Weighted-average number of common shares outstanding:				
Basic	18,271	18,014	18,219	17,974
Diluted	18,398	18,014	18,356	17,974

(1) See complete, unaudited Condensed Consolidated Financial Statements and Notes related thereto within the Quarterly Report on Form 10-Q for the period ended June 30, 2021.

Appendix D: 10-Q Cash Flow⁽¹⁾

(in thousands)

Cash flows from operating activities


	Six Months Ended June 30,	
	2021	2020
Net income (loss)	\$ 30,327	\$ (25,707)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Deferred income tax expense	6,817	11,647
Depreciation, amortization, depletion and accretion	4,010	4,030
Impairment of long-lived assets	—	26,103
Operating lease expense	912	1,353
Amortization of debt discount and debt issuance costs	945	709
Gain on change in estimate, asset retirement obligation	(1,942)	—
Stock-based compensation expense	987	1,644
Earnings from equity method investments	(39,749)	(16,441)
Other non-cash items, net	(319)	31
Changes in operating assets and liabilities:		
Receivables and related party receivables	1,362	2,854
Prepaid expenses and other assets	(723)	(11,129)
Inventories, net	1,327	(590)
Other long-term assets, net	616	(224)
Accounts payable	150	(1,095)
Accrued payroll and related liabilities	(597)	134
Other current liabilities	(1,468)	(515)
Operating lease liabilities	(1,314)	(1,213)
Other long-term liabilities	(2,334)	(22)
Distributions from equity method investees, return on investment	19,144	32,516
Net cash provided by operating activities	<u>18,151</u>	<u>24,085</u>

(1) See complete, unaudited Condensed Consolidated Financial Statements and Notes related thereto within the Quarterly Report on Form 10-Q for the period ended June 30, 2021.


Appendix D: 10-Q Cash Flow (continued)⁽¹⁾

<i>(in thousands)</i>	Six Months Ended June 30,	
	2021	2020
Cash flows from investing activities		
Distributions from equity method investees in excess of cumulative earnings	\$ 24,732	\$ —
Acquisition of property, plant, equipment, and intangible assets, net	(4,573)	(4,189)
Mine development costs	(653)	(507)
Proceeds from sale of property and equipment	895	—
Net cash provided by (used in) investing activities	20,401	(4,696)
Cash flows from financing activities		
Principal payments on term loan	(16,000)	(12,000)
Principal payments on finance lease obligations	(818)	(676)
Dividends paid	(90)	(4,828)
Repurchase of common shares	—	(159)
Repurchase of common shares to satisfy tax withholdings	(241)	(378)
Borrowings from Paycheck Protection Program Loan	—	3,305
Net cash used in financing activities	(17,149)	(14,736)
Increase in Cash and Cash Equivalents and Restricted Cash	21,403	4,653
Cash and Cash Equivalents and Restricted Cash, beginning of period	35,932	17,080
Cash and Cash Equivalents and Restricted Cash, end of period	\$ 57,335	\$ 21,733
Supplemental disclosure of non-cash investing and financing activities:		
Acquisition of property, plant and equipment through accounts payable	\$ 163	\$ 223
Dividends payable	\$ —	\$ 77

(1) See complete, unaudited Condensed Consolidated Financial Statements and Notes related thereto within the Quarterly Report on Form 10-Q for the period ended June 30, 2021.



Appendix E: Non-GAAP Financial Measure & Consolidated Adjusted EBITDA Reconciliation to Net Income

Note on Non-GAAP Financial Measures

To supplement the Company's financial information presented in accordance with U.S. generally accepted accounting principles, or GAAP, this investor presentation includes non-GAAP measures of certain financial performance. These non-GAAP measures include Consolidated Adjusted EBITDA, APT Segment Adjusted EBITDA and RC Segment Adjusted EBITDA. The Company included non-GAAP measures because management believes that they help to facilitate comparison of operating results between periods. The Company believes the non-GAAP measures provide useful information to both management and users of the financial statements by excluding certain expenses that may not be indicative of core operating results and business outlook. These non-GAAP measures are not in accordance with, or an alternative to, measures prepared in accordance with GAAP and may be different from non-GAAP measures used by other companies. In addition, these non-GAAP measures are not based on any comprehensive set of accounting rules or principles. These measures should only be used to evaluate the Company's results of operations in conjunction with the corresponding GAAP measures.

The Company has defined Consolidated Adjusted EBITDA as net income, adjusted for the impact of the following items that are either non-cash or that the Company does not consider representative of its ongoing operating performance: depreciation, amortization, depletion and accretion, amortization of upfront customer consideration, interest expense, net, income tax expense; then reduced by the non-cash impact of equity earnings from equity method investments and gain on change of an estimate for asset retirement obligations and increased by cash distributions from equity method investments and impairment. The Company believes that the Consolidated Adjusted EBITDA measure is less susceptible to variances that affect the Company's operating performance.

Segment EBITDA is calculated as Segment operating income (loss) adjusted for the impact of the following items that are either non-cash or that the Company does not consider representative of its ongoing operating performance: depreciation, amortization, depletion and accretion, amortization of upfront customer consideration and interest expense, net. When used in conjunction with GAAP financial measures, Segment EBITDA is a supplemental measure of operating performance that management believes is a useful measure related to the Company's APT segment performance and the APT segment performance relative to the performance of their respective competitors as well as performance period over period. Additionally, the Company believes these measures are less susceptible to variances that affect their respective operating performance results.

The Company defines RC Segment Adjusted EBITDA as RC Segment EBITDA reduced by the non-cash impact of equity earnings from equity method investments and increased by cash distributions from equity method investments.

The Company defined APT Segment Adjusted EBITDA as APT Segment EBITDA decreased for the gain on change of an estimate for asset retirement obligations and increased for impairment.

The Company presents the non-GAAP measures because the Company believes they are useful as supplemental measures in evaluating the performance of the Company's operating performance and provide greater transparency into the results of operations. The Company's management uses Consolidated Adjusted EBITDA, RC Segment Adjusted EBITDA and APT Segment Adjusted EBITDA as factors in evaluating the performance of its business.

The adjustments to Consolidated Adjusted EBITDA, RC Segment Adjusted EBITDA and APT Segment Adjusted EBITDA in future periods are generally expected to be similar. Consolidated Adjusted EBITDA, RC Segment Adjusted EBITDA and APT Segment Adjusted EBITDA have limitations as analytical tools, and you should not consider these measures in isolation or as a substitute for analyzing the Company's results as reported under GAAP.

Appendix F: Consolidated Adjusted EBITDA Reconciliation to Net Income (Loss)

<i>(in thousands)</i>	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Net income (loss)	\$ 16,590	\$ (23,814)	\$ 30,327	\$ (25,707)
Depreciation, amortization, depletion and accretion	1,904	1,733	4,010	4,030
Amortization of Upfront Customer Consideration	127	—	254	—
Interest expense, net	434	945	1,163	2,113
Income tax expense	4,943	103	9,432	461
Consolidated EBITDA (loss)	23,998	(21,033)	45,186	(19,103)
Cash distributions from equity method investees	20,625	15,400	43,876	32,516
Equity earnings	(21,437)	(8,168)	(39,749)	(16,441)
Gain on change in estimate, asset retirement obligation	(1,942)	—	(1,942)	—
Impairment	—	26,103	—	26,103
Consolidated Adjusted EBITDA	\$ 21,244	\$ 12,302	\$ 47,371	\$ 23,075

Appendix G: RC Segment Adjusted EBITDA Reconciliation to Segment Operating Income

<i>(in thousands)</i>	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
RC Segment operating income	\$ 24,905	\$ 10,777	\$ 47,176	\$ 21,637
Depreciation, amortization, depletion and accretion	12	32	32	59
Interest expense	7	28	7	160
RC Segment EBITDA	24,924	10,837	47,215	21,856
Cash distributions from equity method investees	20,625	15,400	43,876	32,516
Equity earnings	(21,437)	(8,168)	(39,749)	(16,441)
RC Segment Adjusted EBITDA	\$ 24,112	\$ 18,069	\$ 51,342	\$ 37,931

Appendix H: APT Segment EBITDA Reconciliation to Segment Operating Income (Loss)

<i>(in thousands)</i>	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
APT Segment operating income (loss)	\$ 258	\$ (29,999)	\$ 273	\$ (37,369)
Depreciation, amortization, depletion and accretion	1,770	1,538	3,702	3,782
Amortization of Upfront Customer Consideration	127	—	254	—
Interest expense, net	79	93	158	187
APT Segment EBITDA (loss)	\$ 2,234	\$ (28,368)	\$ 4,387	\$ (33,400)
Gain on change in estimate, asset retirement obligation	(1,942)	—	(1,942)	—
Impairment	—	26,103	—	26,103
APT Segment Adjusted EBITDA (loss)	\$ 292	\$ (2,265)	\$ 2,445	\$ (7,297)