



Advanced Emissions Solutions, Inc.

Advancing Cleaner Energy

Fourth Quarter & Full Year 2021 Earnings Results Call

March 9, 2022





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; expectations regarding achievements of our 2022 priorities, results from the Company's review of strategic alternatives and other matters. These statements are based on current expectations, estimates, projections, beliefs and assumptions of our management. These forward-looking 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, opportunities for additional sales of our lignite activated carbon products and end-market diversification, 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, timing of new and pending regulations and any legal challenges to or extensions of compliance dates of them; the US government's failure to promulgate regulations that benefit our business; changes in laws, regulations, IRS interpretations or guidance, accounting rules, any pending court decisions, prices, economic conditions and market demand; impact of competition; availability, cost of and demand for alternative energy sources and other technologies; technical, start-up and operational difficulties; competition within the industries in which we operate; loss of key personnel; ongoing effects of the COVID-19 pandemic and associated economic downturn on our operations and prospects; as well as other factors relating to our business, as discussed 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. In addition to causing our actual results to differ, the factors listed above may cause our intentions to change from those statements of intention set forth in this presentation. Such changes in our intentions may also cause our results to differ. We may change our intentions, at any time and without notice, based on changes in such factors, our assumptions, or otherwise. 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.

FOURTH QUARTER 2021 BUSINESS SUMMARY



Advanced Purification Technologies (“APT”)

- Q4 revenue was \$23.3M compared to \$16.3M
- Q4 segment operating income totaled \$0.8M compared to \$0.7M
- Q4 segment Adjusted EBITDA⁽¹⁾ of \$1.9M compared to a segment Adjusted EBITDA loss of \$2.3M
- Record revenue and production volume for the full year 2021



Refined Coal (“RC”)

- Q4 distributions were \$7.3M compared to \$20.2M in 2020
- Q4 royalties were \$2.5M compared to \$3.5M
- Q4 segment operating income was \$9.1M compared to \$8.2M
- Q4 segment Adjusted EBITDA⁽¹⁾ was \$9.6M compared to \$23.5M



Consolidated Results & Capital Allocation

- Q4 net income of \$5.8M compared to \$0.4M
- Q4 consolidated Adjusted EBITDA⁽²⁾ of \$9.1M compared to \$23.4M
- Cash, including restricted cash, of \$88.8M compared to \$35.9M as of December 31, 2020



Outlook

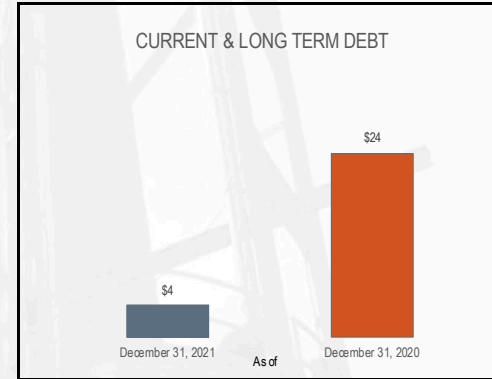
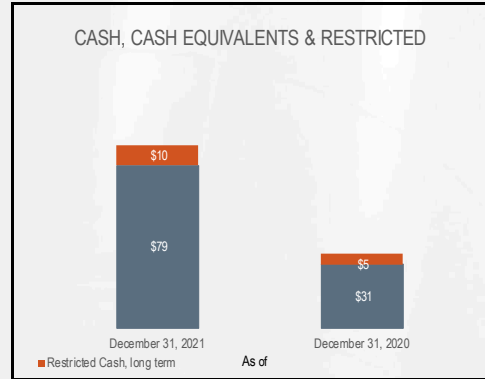
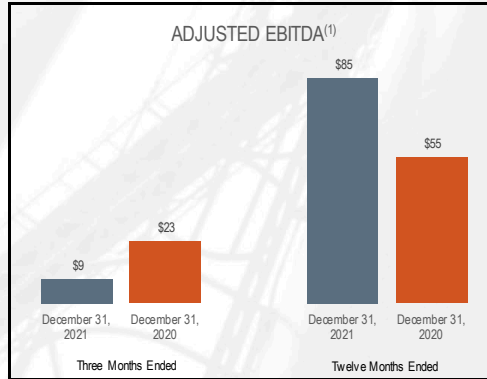
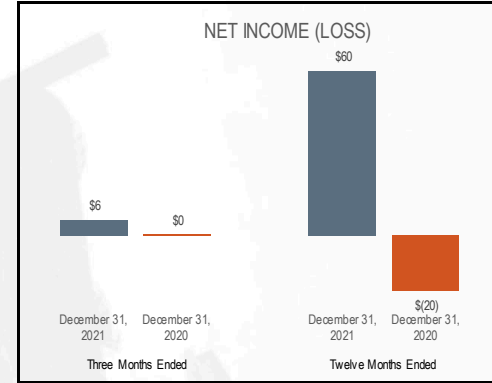
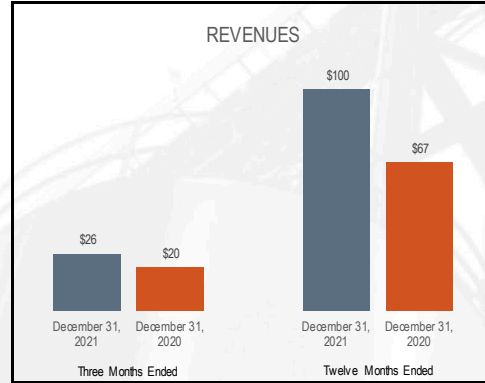
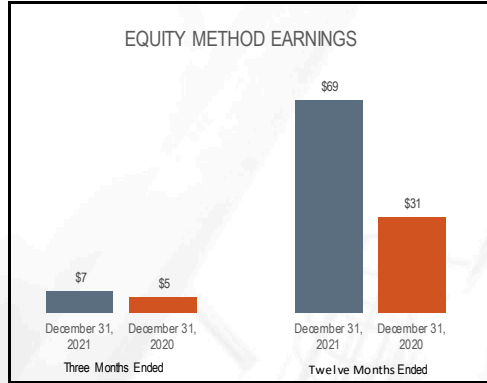
- Expect continued top-line strength in APT segment
- Margin pressures expected to persist well into 2022, though will be partially offset via price initiatives and product mix
- Net, after-tax cash flows from RC segment projected to be between \$4.0-5.0M in 1H'22
- Strategic alternatives review remains ongoing

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

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



FINANCIAL HIGHLIGHTS



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

APT SEGMENT GROWTH OPPORTUNITIES

Power Generation

Currently the North American provider-of-choice in mercury removal for coal-fired power generation. We leverage our leading IP, manufacturing assets, technologies and relationships to maintain our market position. However, this market is likely to remain structurally more challenged as aggregate coal burn is expected to decline over time.



Industrial and Municipal Water

In response, we have developed a solid market position for certain Industrial applications and Municipal water – including markets that the Red River plant did not previously serve – which has diversified our product and customer mix.



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 volumes for 2021 were the highest in the history of ADA Carbon Solutions, helped by the Cabot supply agreement and demand from our power generation market, and as we are selling into a more balanced mix of commercial markets.





2022 PRIORITIES



ENHANCE LONG-TERM PROFITABILITY IN APT SEGMENT:

- Capitalize on highly efficient and low-cost world class manufacturing facilities
- Pursue optimal customer mix to leverage enhanced value creation through new customer contracts
- Structurally upgrade customer contracting terms to minimize headwinds from increased cost pressures stemming from inventory build and supply chain challenges
- Accelerate diversification among product and customer mix through investment in new product development
- Remain vigilant for additional rationalization opportunities and supply agreements



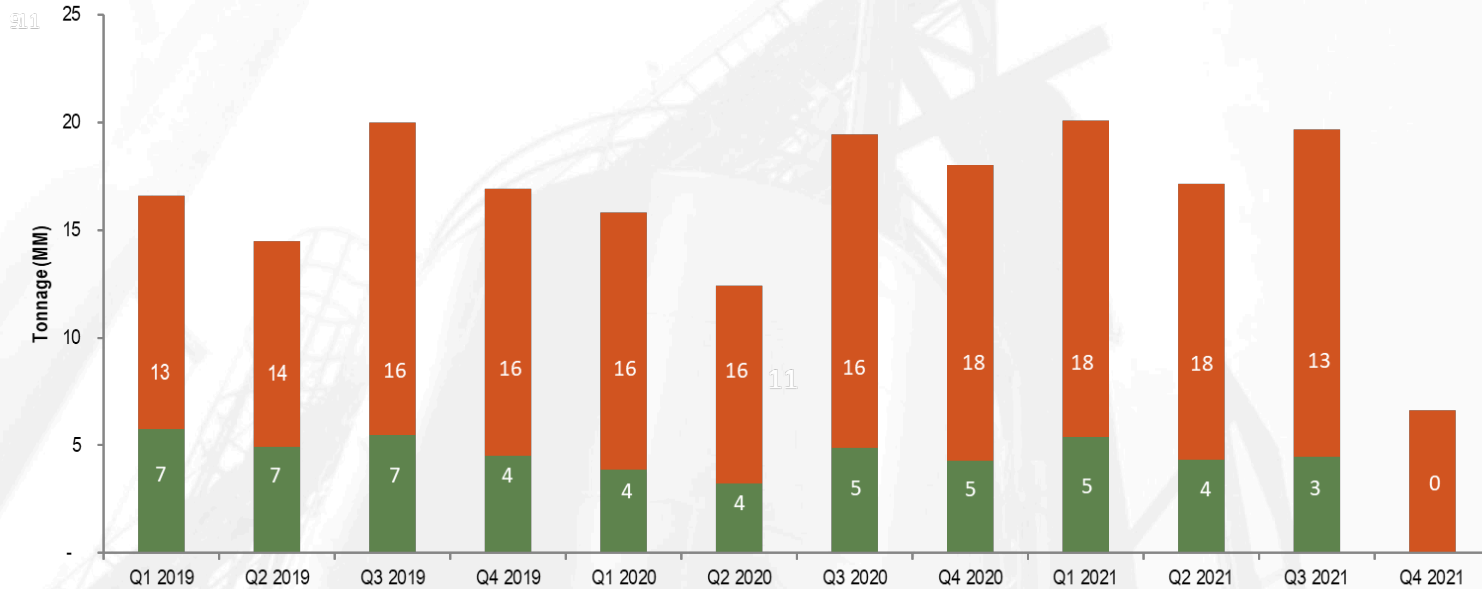
ALLOCATE CASH FLOWS & ASSETS TO DRIVE SHAREHOLDER VALUE:

- Invest in APT segment's strategic initiatives to solidify position as provider-of-choice for activated carbon
- Conclude strategic alternatives review and ensure maximization of shareholder value



APPENDIX

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



Three Month Ended December 31, 2021	Operating Tons		QTD - Total
	Royalty	Non-Royalty	
Tonnage ⁽¹⁾	6,639	1,083	7,722
Count (#) ⁽²⁾	13	3	16

Twelve Months Ended December 31, 2021	Operating Tons		YTD - Total
	Royalty	Non-Royalty	
Tonnage ⁽¹⁾	49,307	15,292	64,599
Count (#) ⁽²⁾	18	5	23

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 twelve months ended December 31, 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-K Balance Sheet⁽¹⁾

(in thousands, except share data)

	As of December 31,	
	2021	2020
ASSETS		
Current assets:		
Cash, cash equivalents and restricted cash	\$ 78,753	\$ 30,932
Receivables, net	12,622	13,125
Receivables, related party	2,481	3,453
Inventories, net	7,850	9,882
Prepaid expenses and other current assets	6,661	4,597
Total current assets	<u>108,367</u>	<u>61,989</u>
Restricted cash, long-term	10,027	5,000
Property, plant and equipment, net of accumulated depreciation of \$7,684 and \$3,340, respectively	30,171	29,433
Intangible assets, net	1,237	1,964
Equity method investments	2,391	7,692
Deferred tax assets, net	—	10,604
Other long-term assets, net	33,243	29,989
Total Assets	<u>\$ 185,436</u>	<u>\$ 146,671</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 10,009	\$ 7,849
Accrued payroll and related liabilities	6,477	3,257
Current portion of long-term debt	1,011	18,441
Other current liabilities	5,124	12,996
Total current liabilities	<u>22,621</u>	<u>42,543</u>
Long-term debt, net of current portion	3,152	5,445
Other long-term liabilities	12,362	13,473
Total Liabilities	<u>38,135</u>	<u>61,461</u>
Commitments and contingencies (Note 14)		
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, 23,460,212 and 23,141,284 shares issued and 18,842,066 and 18,523,138 shares outstanding at December 31, 2021 and 2020, respectively	23	23
Treasury stock, at cost: 4,618,146 and 4,618,146 shares as of December 31, 2021 and 2020, respectively	(47,692)	(47,692)
Additional paid-in capital	102,106	100,425
Retained earnings	92,864	32,454
Total stockholders' equity	<u>147,301</u>	<u>85,210</u>
Total Liabilities and Stockholders' equity	<u>\$ 185,436</u>	<u>\$ 146,671</u>

(1) See complete, audited Consolidated Financial Statements and Notes related thereto within the Annual Report on Form 10-K for the period ended December 31, 2021.

Appendix C: 10-K Income Statement⁽¹⁾

<i>(in thousands, except per share data)</i>	Years Ended December 31,	
	2021	2020
Revenues:		
Consumables	\$ 85,882	\$ 53,908
License royalties, related party	14,368	13,440
Other	44	15
Total revenues	<u>100,294</u>	<u>67,363</u>
Operating expenses:		
Consumables cost of revenues, exclusive of depreciation and amortization	65,576	50,962
Other cost of revenues, exclusive of depreciation and amortization	—	(563)
Payroll and benefits	11,315	10,621
Legal and professional fees	6,260	5,585
General and administrative	7,060	8,228
Depreciation, amortization, depletion and accretion	7,933	8,537
Gain on change in estimate, asset retirement obligation	(2,702)	—
Impairment of long-lived assets	—	26,103
Gain on settlement	—	(1,129)
Total operating expenses	<u>95,442</u>	<u>108,344</u>
Operating income (loss)	<u>4,852</u>	<u>(40,981)</u>
Other income (expense):		
Earnings from equity method investments	68,726	30,978
Gain on extinguishment of debt	3,345	—
Interest expense	(1,490)	(3,920)
Other	640	132
Total other income	<u>71,221</u>	<u>27,190</u>
Income (loss) before income tax expense	<u>76,073</u>	<u>(13,791)</u>
Income tax expense	15,672	6,511
Net income (loss)	<u>\$ 60,401</u>	<u>\$ (20,302)</u>
Earnings (loss) per common share (Note 1):		
Basic	\$ 3.31	\$ (1.12)
Diluted	\$ 3.27	\$ (1.12)
Weighted-average number of common shares outstanding:		
Basic	18,258	18,044
Diluted	18,461	18,044

(1) See complete, audited Consolidated Financial Statements and Notes related thereto within the Annual Report on Form 10-K for the period ended December 31, 2021.

Appendix D: 10-K Cash Flow⁽¹⁾

<i>(in thousands)</i>	Years Ended December 31,	
	2021	2020
Cash flows from operating activities		
Net income (loss)	\$ 60,401	\$ (20,302)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Deferred income tax expense	10,604	3,491
Depreciation, amortization, depletion and accretion	7,933	8,537
Amortization of debt discount and debt issuance costs	945	1,418
Operating lease expense	2,038	3,559
Gain on extinguishment of debt	(3,345)	—
Gain on change in estimate, asset retirement obligation	(2,702)	—
Impairment of long-lived assets	—	26,103
Gain on settlement	—	(1,129)
Recovery of accounts receivable and other receivables	(36)	(990)
Stock-based compensation expense	1,927	2,496
Earnings from equity method investments	(68,726)	(30,978)
Other non-cash items, net	(173)	192
Changes in operating assets and liabilities, net of effects of acquired businesses:		
Receivables, net	540	(2,541)
Related party receivables	972	794
Prepaid expenses and other current assets	(2,064)	3,234
Inventories, net	1,394	4,748
Other long-term assets, net	1,838	(1,005)
Accounts payable	1,977	(196)
Accrued payroll and related liabilities	3,220	233
Other current liabilities	(8,279)	(520)
Operating lease liabilities	(2,764)	(2,200)
Other long-term liabilities	(2,645)	(3,337)
Distributions from equity method investees, return on investment	22,944	62,441
Net cash provided by operating activities	\$ 25,999	\$ 54,048


(1) See complete, audited Consolidated Financial Statements and Notes related thereto within the Annual Report on Form 10-K for the period ended December 31, 2021.

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

(in thousands)

	Years Ended December 31,	
	2021	2020
Cash flows from investing activities		
Distributions from equity method investees in excess of cumulative earnings	\$ 51,082	\$ —
Acquisition of property, equipment and intangible assets, net	(6,201)	(6,685)
Mine development costs	(1,398)	(781)
Proceeds from sale of property and equipment	895	—
Net cash provided by (used in) investing activities	<u>44,378</u>	<u>(7,466)</u>
Cash flows from financing activities		
Principal payments on term loan	(16,000)	(24,000)
Principal payments on finance lease obligations	(1,190)	(1,360)
Dividends paid	(93)	(4,979)
Borrowings from Paycheck Protection Program Loan	—	3,305
Repurchase of shares to satisfy tax withholdings	(246)	(537)
Repurchase of common shares	—	(159)
Net cash used in financing activities	<u>(17,529)</u>	<u>(27,730)</u>
Increase in Cash, Cash Equivalents and Restricted Cash	52,848	18,852
Cash, Cash Equivalents and Restricted Cash, beginning of year	35,932	17,080
Cash, Cash Equivalents and Restricted Cash, end of year	<u>\$ 88,780</u>	<u>\$ 35,932</u>
Supplemental disclosure of cash flow information:		
Cash paid for interest	\$ 524	\$ 2,489
Cash paid (received) for income taxes	\$ 8,882	\$ (84)
Supplemental disclosure of non-cash investing and financing activities:		
Change in accrued purchases for property and equipment	\$ 183	\$ —
Change in asset retirement obligation	\$ 121	\$ 421
Acquisition of property and equipment under finance lease	\$ —	\$ 158
Dividends payable	\$ —	\$ 32

(1) See complete, audited Consolidated Financial Statements and Notes related thereto within the Annual Report on Form 10-K for the period ended December 31, 2021.



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

Note on Non-GAAP Financial Measures

To supplement the Company's financial information presented in accordance with GAAP, the Company is providing non-GAAP measures of certain financial performance. These non-GAAP measures include Consolidated EBITDA, Consolidated Adjusted EBITDA, RC Segment EBITDA, RC Segment Adjusted EBITDA, APT Segment EBITDA and APT Segment Adjusted EBITDA. The Company has included non-GAAP measures because management believes that they help to facilitate period to period comparisons of the Company's operating results. The Company believes the non-GAAP measures provide useful information to both management and users of the financial statements by excluding certain expenses, gains and losses that may not be indicative of core operating results and business outlook. Management uses these non-GAAP measures in evaluating the performance of the Company's business.

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 defines Consolidated EBITDA as net income adjusted for the impact of the following items that are either non-cash or that it does not consider representative of its ongoing operating performance: depreciation, amortization, depletion, accretion, amortization of upfront customer consideration that was recorded as a component of the Marshall Mine Acquisition ("Upfront Customer Consideration"), interest expense, net, and income tax expense. The Company defines Consolidated Adjusted EBITDA as Consolidated EBITDA reduced by the non-cash impacts of equity earnings from equity method investments, gain on change in estimate of asset retirement obligations, gain on extinguishment of debt, and gain on customer settlement and increased by cash distributions from equity method investments and impairment of long-lived assets. Because Consolidated Adjusted EBITDA omits certain non-cash items, the Company believes that the measure is less susceptible to variances that affect its operating performance.

The Company defines APT Segment EBITDA as APT Segment operating income (loss) adjusted for the impact of the following items that are either non-cash or that it does not consider representative of its ongoing operating performance: depreciation, amortization, depletion, accretion, amortization of Upfront Customer Consideration and interest expense, net. The Company defines APT Segment Adjusted EBITDA as APT Segment EBITDA reduced by gain on extinguishment of debt, gain on change in estimate of asset retirement obligation, gain on customer settlement and increased by impairment of long-lived assets.

The Company defines RC Segment EBITDA as RC Segment operating income adjusted for the impact of the following items that are either non-cash or that it does not consider representative of its ongoing operating performance: depreciation, amortization, depletion, accretion and interest expense. 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 gain on extinguishment of debt and increased by cash distributions from equity method investments.

When used in conjunction with GAAP financial measures, the Company believes these non-GAAP measures are supplemental measures of operating performance that explain its operating performance for its period to period comparisons and against its competitors' performance. Generally, the Company believes these non-GAAP measures are less susceptible to variances that affect its operating performance results.

With the exception of extinguishment of debt, gain on change in estimate, asset retirement obligation, impairment on long-lived assets and gain on settlement, the adjustments to Consolidated Adjusted EBITDA and APT Segment Adjusted EBITDA in future periods are generally expected to be similar. These non-GAAP measures have limitations as analytical tools, and should not be considered in isolation or as a substitute for analyzing its results as reported under GAAP.

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

<i>(in thousands)</i>	Three Months Ended December 31,		Year ended December 31,	
	2021	2020	2021	2020
Net income (loss)	\$ 5,821	\$ 430	\$ 60,401	\$ (20,302)
Depreciation, amortization, depletion and accretion	1,778	2,730	7,933	8,537
Amortization of Upfront Customer Consideration	127	158	508	158
Interest expense, net	(24)	819	1,164	3,793
Income tax expense (benefit)	1,659	5,196	15,672	6,511
Consolidated EBITDA (loss)	9,361	9,333	85,678	(1,303)
Cash distributions from equity method investees	7,275	20,213	74,026	62,441
Equity earnings	(6,782)	(5,019)	(68,726)	(30,978)
Gain on extinguishment of debt	—	—	(3,345)	—
Gain on change in estimate, asset retirement obligation	(760)	—	(2,702)	—
Impairment	—	—	—	26,103
Gain on settlement	—	(1,129)	—	(1,129)
Consolidated Adjusted EBITDA	\$ 9,094	\$ 23,398	\$ 84,931	\$ 55,134

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

<i>(in thousands)</i>	Three Months Ended December 31,		Year ended December 31,	
	2021	2020	2021	2020
RC Segment operating income	\$ 9,117	\$ 8,235	\$ 82,634	\$ 42,689
Depreciation, amortization, depletion and accretion	(1)	32	40	116
Interest expense	1	77	12	331
RC Segment EBITDA	9,117	8,344	82,686	43,136
Cash distributions from equity method investees	7,275	20,213	74,026	62,441
Equity earnings	(6,782)	(5,019)	(68,726)	(30,978)
Gain on extinguishment of debt	—	—	(97)	—
RC Segment Adjusted EBITDA	\$ 9,610	\$ 23,538	\$ 87,889	\$ 74,599

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

<i>(in thousands)</i>	Three Months Ended December 31,		Year ended December 31,	
	2021	2020	2021	2020
APT Segment operating income (loss)	\$ 785	\$ 691	\$ 5,649	\$ (39,958)
Depreciation, amortization, depletion and accretion	1,682	2,484	7,388	7,870
Amortization of Upfront Customer Consideration	127	158	508	158
Interest expense, net	64	128	297	402
APT Segment EBITDA (loss)	2,658	3,461	13,842	(31,528)
Gain on extinguishment of debt	—	—	(2,562)	—
Gain on change in estimate, asset retirement obligation	(760)	—	(2,702)	—
Impairment	—	—	—	26,103
Gain on settlement	—	(1,129)	—	(1,129)
APT Segment Adjusted EBITDA (loss)	\$ 1,898	\$ 2,332	\$ 8,578	\$ (6,554)