CRYSTAL | EQUITY RESEARCH

WESTWATER RESOURCES, INC.

Update Report

November 19, 2020

WWR / Nasdaq

SPECULATIVE BUY

Unchanged

$20.00

(Revised 11/19/20)

CAPITALIZATION	
Shares Outstand. (11/12/20)	19.0 M
Recent Price (11/18/20)	$5.09
Market Capitalization	$ 96.8 M
+ Debt	0.0 M
- Cash	5.5 M
Enterprise Value	$ 91.3 M
Book Value	$ 15.3 M
Working Capital	$ 5.3 M
Dividend	Nil

Balance sheet figures as of 9/30/20

MARKET DATA	
Bid-Ask Spread, % Price	0.2%
52 Week High/Low	$14.50 - $0.25
Shares Outstanding	19.0 M
Inside Ownership	<1%
Institutional Ownership	50.0%
Estimated Flotation	8.0 M
Average Daily Volume	4.9 M
Short Interest, % of Float	Nil
Beta	2.10

Source: Bloomberg LP

INVESTMENT RETURNS	WWR	Sector*
Return on Equity	Neg	9.78%
Return on Assets	Neg	4.62%
Return on Capital	Neg	6.06%

Source: Crystal Equity Research, CSI Markets

FINANCIAL PROFILE	FY18	FY19
Sales	$ 0.0 M	$ 0.0 M
EBITDA	($36.1) M	($10.3) M
(L)EPS	($38.47)	($5.39)

Source: Company Reports

HIGHLIGHTS

- **Asset Sale.** Previously announced sale of uranium assets is expected to close by the end of December 2020.
- **Capital Raise**. A total of $57.5 million in new capital was raised in the period July through October 2020, leaving the Company with $53.3 million in cash on its balance sheet at October 31st.
- **Pilot Plant**. A distributed pilot production process is ready to begin in December 2020, to test designs for the Company's proprietary battery-grade graphite technology. A provisional patent has been filed with the U.S. patent office to protect elements of the process from competitive encroachment.
- **Final Study**. By June 2020, management expects to have results from a final economic assessment for its graphite project. The study will be used to land financing for a commercial scale processing facility adjacent to the Company's Coosa County, Alabama graphite project
- **Under Valuation**. An estimated net present value of $603 million pre tax for the graphite project suggests WWR shares have an intrinsic value of $11.50, well above the current stock price.

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INDUSTRY: INDUSTRIAL, ENERGY MATERIALS	WWR: NASDAQ

RECENT DEVELOPMENTS

Westwater Resources appears to have accelerated its progress toward the battery-grade graphite market. A new timetable issued with financial results for the third quarter 2020, calls for materials production through a pilot process yet in 2020 and continuing in early 2021. Following recent sales of common stock, the Company is now well fortified with a cash kitty of $53 million to complete a final feasibility study and seek project financing for a commercial scale graphite processing plant that will be located in Alabama. Results from the pilot process will provide data for the feasibility study and construction of the commercial scale plant in 2022. The Company will rely on third-party suppliers of suitable graphite concentrate until it is ready to being mine activity in 2028.

RECOMMENDATION

Our rating of WWR remains Speculative Buy. After an extended period of slower but consistent progress, the Company appears well on a path for a return from its investment in graphite assets. The probability for success has improved significantly.

Our price target has been revised to $20.00 to reflect the anticipated divestiture of the Company's uranium assets, recent progress with the development of battery-grade graphite materials, and the accomplishment of financing for near-term strategic objectives. These developments significantly improve the probability of success in realizing profits from Company's graphite materials. Importantly, the revised target price also reflects increased shares outstanding through the sale of common stock.

We note that the stock has experienced an increase in price volatility under exceptional trading volumes. The stock price movement appears to have been linked to news and developments in the broader energy materials markets that has resulted in highly speculative trading in the shares of graphite, lithium, uranium and cobalt developers. Accordingly, we offer a particular caution to investors with low tolerance for price volatility.

VALUATION

Price/Sales	Neg
Price/Cash Flow	Neg
Price/EPS	Neg
Price/Book Value	6.32 X
Consensus EPS 2020	na
Forward PE	na

Per share figures estimated 9/30/20

OPERATING PROJECTIONS

	2017A	2018A	2019A	*2020E*	*2021E*
Sales	$ 0.0	$0.0	$ 0.0	*$ 0.0*	*$ 0.0*
Operating (Loss)	($ 24.8)	($36.0)	($10.9)	*($ 12.9)*	*($ 11.8*
Net Inc (Loss)	($ 19.0)	($35.7)	($ 10.6)	*($19.3)*	*($ 11.8)*
CFO (U)	($ 11.6)	($11.7)	($ 10.0)	*($12.4)*	*($ 15.5)*
EPS (LPS)	($38.50)	($38.50)	($5.39)	*($1.41)*	*($0.62)*

Dollars in millions except per share earnings

Company Reports and Crystal Equity Research Estimates

QUARTER HIGHLIGHTS

Mid November 2020, Westwater Resources reported financial results for the quarter ending September 2020. Still at a developmental stage, the Company reported no revenue and $3.3 million on operating expenses, bringing total expenses for the first nine months of the year to $6.9 million. As the Company accelerates work on its battery-grade graphite materials, spending on product development was reported separately from general expenses and totaled $1.6 million in the quarter. Importantly, the Company used $4.0 million in cash resources to support operations in the quarter, bringing total cash used in the first nine months of the year to $10.1 million.

The details on spending were but a passing topic compared to disclosures of capital raised through the sale of common stock. The Company had raised $7.2 million in cash during the quarter from the sale of 3.8 million shares of common stock. However, it was the capital raise of another $50.2 million subsequent to the quarter end that triggered investor interest. Both were accomplished through equity purchase agreements that had been previously put into place with two separate financial institutions. In October 2020 during a period of record price strength, the Company sold 8.5 million shares at an average $5.91 per share. Indeed, during the conference call to discuss third quarter results management's opening remarks were focused for some minutes on how the Company was able to take advantage of recent price movements triggered by battery industry events and favorable news in energy materials markets. The discussion was all the more remarkable given that Westwater management rarely comments on stock price movement.

Importantly, the capital raise helps deliver on a promise made by management a year ago in forging a new common stock placement agreement with Lincoln Park Capital. At the time management had touted the agreement as giving the Company latitude to quickly take advantage of favorable stock prices and thereby minimize stock dilution.

In our view, it is significant that the Company's strategic plan is funded well into 2022. The cash balance at the beginning of November 2020, was approximately $53 million, an amount sufficient to support a mix of strategic budget items: 1) graphite pilot process program, 2) completion of a final feasibility study for the Alabama graphite project, 3) completion of additional vanadium exploration tests at the Coosa County, Alabama resource, and 4) working capital through the first part of 2022.

Revised Balance Sheet

Westwater's balance sheet at the end of September 2020, reflected the pending sale of the Company's uranium assets in Texas and New Mexico. The uranium interests are now classified as discontinued operations while the acquirer enCore Energy Corporation (EU: TSX.V) completes due diligence. The assets and liabilities associated with the Texas operations are now sequestered on the balance as 'held for sale', providing an advance view on the Company's balances as it turns to focus exclusively on its graphite project. We note that the Company also reported a $6.4 million loss from discontinued operations, which included a $5.2 million write down of asset values triggered by purchase price account rules that apply to the asset sale.

GRAPHITE TIMELINE - Acceleration and Delay

Pilot Plant Commissioning and Operation – Early 2021

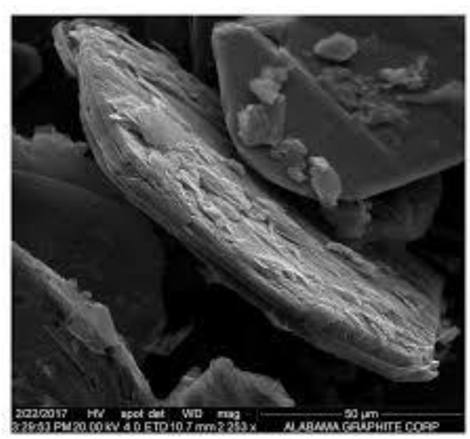
During the earnings conference call CEO Chris Jones provided some details on the pilot production processes that have been under development over the last couple of months. The Company has taken steps beyond the conventional pilot plant that is usually a small-scale version of the eventual commercial plant. Instead the least-cost path appears to have been taken, encompassing company-owned equipment, capacity at laboratory and engineering firms and contract services at qualified vendors. The arrangement has proven advantageous during the current pandemic period when travel has been restricted or under advisory. Efficient shipping infrastructure is making it possible to move the materials among facilities while keeping key personnel safe.

The various processing steps are distributed among sites in Germany and the U.S. Initial purification and screening steps are apparently carried out in Germany at facilities owned by the engineering firm Dorfner Anzaplan, which was engaged to help design the process. The purified graphite is sorted into best sizes for the Company's three graphite materials products: *Delaminated Expanded Purified Graphite* (DEXDG), *Purified Micronized Graphite* (PMG) and Coated Spherical Purified Graphite (CSPG). Materials best suited for *CSPG* will be sent to a nearby location for spheronization. The largest sizes will be sent to laboratory in Chicago, Illinois to complete the expansion and delamination steps for *DEXDG*.

The materials processed in the pilot arrangement will be used for customer qualification and testing over the next two years. Indeed, a potential customer has been waiting in the wings with an order for one metric ton of *PMG* to be tested and qualified for enhancing performance in alkaline batteries. There is no delivery deadline for Westwater's graphite materials and no timeline for an answer from the potential customer.

Final Feasibility Study – Mid-2021

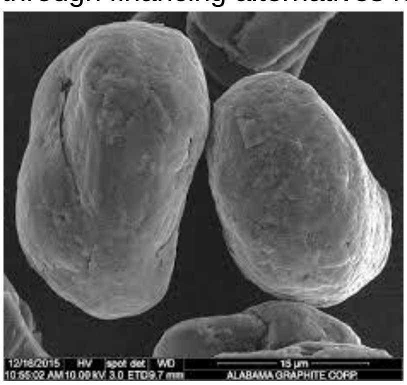
The pilot process operations will provide valuable data on the efficiency of the process design as well as the performance of the finished materials. Performance testing will be carried out in Germany by Dorfner Anzaplan. Westwater is also using a specialized furnace in Buffalo, New York for additional high temperature testing. The initial pilot exercise is expected to be completed by the first quarter 2021, with data then supplied to contracted engineers for a final feasibility study.



A preliminary feasibility study completed in 2015, was helpful in confirming and characterizing the graphite resource in Coosa County, Alabama. It was also helpful in identifying the financial advantages of processing the graphite into a battery-grade material rather than simply selling the graphite concentrate to a distributor. We believe the expense of another feasibility study is worthwhile to help identify any potential obstacles that could come up in the Coosa County location as well as putting a finer point on the capital requirement to construct a commercial scale processing facility and mining infrastructure. Westwater management apparently plans to light a fire under its engineering consultants that will make a final economic assessment available as soon as the end of June 2021.

<u>Project Financing for Commercial Scale Processing Plant – Second-Half 2021</u>

A consulting firm has already been engaged to help Westwater Resources management sort through financing alternatives for a commercial scale plant that could be completed before the end of 2022. Apparently, management is eager to consider any alternative from debt, to equity, to strategic partnerships. The Company estimates a financing requirement of $118 million for the feasibility study, commercial scale plant and working capital through 2022. The estimate appears to be a refinement of a cost estimate used in the Alabama graphite project preliminary economic assessment completed in 2015, in which the processing plant, infrastructure and operating costs for the first two years was estimated at $119.3 million.



<u>Commercial Scale Production - Second-Half 2022</u>

During the earnings conference call management referred a timeline that suggested the Company could produce as much as 3,150 metric tons of finished graphite materials from a commercial scale plant by the end of 2022. The Company apparently has a goal of producing at least 6,300 metric tons of graphite per year through 2027. While the product mix has not been specified, it is reasonable to expect that in the early years the Company might focus on *PMG* given that the customer in the most advanced stage of testing and qualification has chosen *PMG* for its alkaline batteries.

<u>Mining Operations - 2028</u>

It is also notable that the target date for beginning the Coosa County mine operation has now been pushed out to 2028. Through the year 2027 as commercial production remains at a smaller scale, the Company a plans to continuing sourcing graphite concentrate from a third-party supplier. A supplier was qualified and contracted in September 2019, to deliver graphite concentrate similar to the natural flake graphite found in the Company's Alabama deposit. Importantly, getting into the Alabama hills with proper equipment should allow the Company to economically double graphite materials production to 15,000 metric tons per year beginning 2028.

ESTIMATES UPDATE

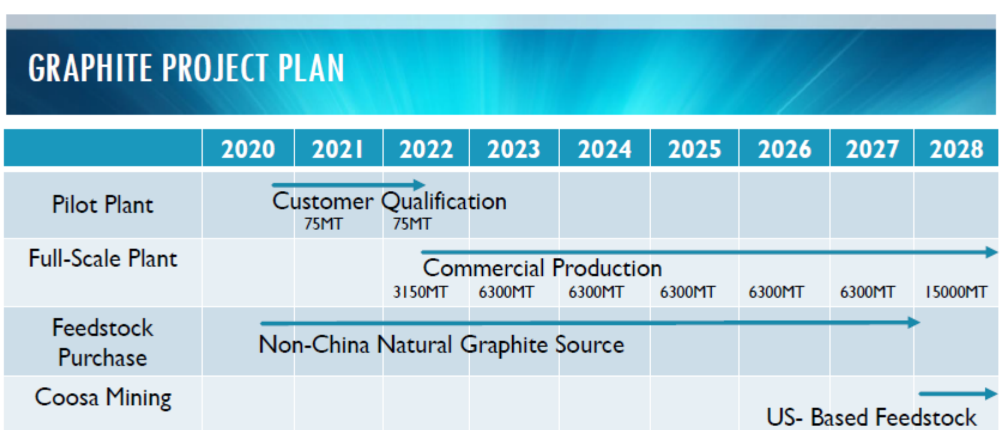
We have updated our projections for Westwater Resources to include third quarter 2020 financial results as well as the impacts of recent strategic developments.

- Our model now reflects the divestiture of the Texas and New Mexico uranium assets in the fourth quarter 2020. We expect the acquirer enCore Energy to complete due diligence and finalize the purchase agreement before the end of December 2020. The deal essentially takes Westwater out of the uranium sector, although our model still reflects expenses to support the Company's ongoing litigation against the Republic of Turkey. The Company is seeking compensation for uranium mining licenses revoked in June 2018, and has submitted a request for arbitration before an international investments panel. The panel is expected to sit for a hearing in September 2021. Until then we expect the Company to incur modest legal expenses.

- Sale of the uranium assets in Texas will lead to an estimated $4.0 million in annual savings through the elimination of spending on maintenance activities. However, our model also reflects new spending on the graphite product development, marketing and sales. Thus we do not expect a decline in operating expenses from recent levels.

- Outstanding shares of 19.01 million are now reflected in our model following the October 2020, capital raise through the sale of 8.5 million shares of common stock pursuant to existing equity purchase agreements.

The model also reflects significant changes in revenue and costs assumptions drawing from management's updated development timetable and production goals. During the third quarter 2020 earnings conference call management presented a new timetable indicating the pilot plant could provide as much as 75 metric tons of graphite materials annually over the next two years for customer qualification purposes. We now expect that Company will receive no revenue for qualification shipments. Commercial production is slated for late 2022, with as much as 3,150 metric tons produced before the end of 2022. An aggressive assumption, our model reflects the sale of the initial commercial production yet in 2022.



Source: Westwater Resources Third Quarter 2020 Presentation

We anticipate significant adjustment to our estimates when the Company presents data from its pilot process experience. The pilot process results should provide insight into production yields and the potential mix among *PMG*, *CSPG* and *DEXDG*. The final economic assessment when published mid-2021 should also inform our model. We also expect the Company to receive feedback from its potential customers that could provide insight into demand that would impact the sales mix and thus production priorities. We note that Westwater's Business Plan published in October 2020, reflects an expectation for production of 5,979 metric tons of CSPG per year out of 15,000 metric tons total at full commercial production beginning 2028. However, the plan is silent on the production mix in the near-term.

For the time being our model reflects 100% production of *PMG* since that is the interest of the customer in the most advanced stage of testing and qualification. Fastmarkets indicates that by July 2020, purified graphite prices had fallen to a two year low in a range of $2,500 to $2,600 per metric ton. The price is expected to firm in 2021, when pandemic conditions abate and demand conditions improve. Our model reflects an aggressive $3,000 per metric ton selling price and an assumption of 50% production cost based on recent graphite concentrate prices and yield results from the most recently published engineering studies in the industry.

Furthermore, management has not disclosed the price it will pay its third-party graphite supplier. According to Fastmarkets, an industry research firm, in early November 2020 graphite concentrate selling prices ranged from $440 per metric ton for small flake supplies and $920 per metric ton for large flake in both European and China markets. Shareholders may have to wait until the final feasibility study is completed to get a reliable view on profit margins for *PMG* materials.

At this point we characterize our pricing, yield and cost assumptions for the initial production as subject to significant adjustment once the Company completes the pilot process, provides guidance on the results and releases the final economic assessment.

Possible adjustments notwithstanding, our model now reflects positive cash flow beginning in 2023, although a reported net loss is still expected through at least 2025. This is more ambitious than management's guidance for positive cash flow beginning in 2024 as reflect in the Company's Business Plan published in October 2020.

VALUATION

In light of Westwater's exit from the uranium sector, progress with its graphite project, and the recent capital raise through the issuance of new shares of common stock, we have revisited our target price for WWR. Our new price target is $20.00 per share over the twelve to eighteen months as the Company reaches commercial production of battery-grade graphite materials, now the principal source of value for Westwater Resources. The change in price target from our previous $30.00 to the new $20.00 target is due in large part to the issuance of new shares that spreads value across a significantly larger number of shares.

Our target price is based in part on technical analysis that recognizes a line of price resistance at the $18.00 to $20.00 price level. The stock has tested and failed at this price level within the last two years. We also note that achievement of our price target may be frustrated by another line of volume-related price resistance at the $9.00 price level. This line developed in fairly recent trading sessions under higher than usual volumes. Importantly, the same trading periods have given rise to a line of volume-related price support at the $4.00 price level. For investors who take positions at the current price, this line could provide modest downside protection.

Fundamental valuation of Westwater Resources is frustrated by the uncertainty in the critical factors that ultimately impact revenue and earnings streams that ultimately create value for shareholders. While we now have a clearer view on planned processing capacity, our analysis is still based on best-guesses for the purchase price and production yields on the graphite concentrate the Company is using. Furthermore, selling prices for Westwater's finished products and production mix are factors impacting future revenue streams. For the time being our long-term calculations are based on sales of *PMG*. Without a firm order, our estimates and valuation are based on speculative selling prices.

Management has referenced valuation conclusions of the preliminary economic assessment (PEA) completed in November 2015. The 2015 PEA concluded a net present value of $444 million pre-tax for the Coosa County graphite project. In our view, the earlier PEA is instructive in its detail, but needs adjustment for current selling prices, changes in the graphite commercialization timetable, plans to outsource graphite concentrate for initial production, and recent production cost dynamics.

Management also references an estimated net present value of $603 million pre-tax in a Business Plan published in October 2020. While the details are not disclosed, we assume the analysis is based on more recent graphite pricing data as well as up to date cost and capacity assumptions. Making an adjustment for taxes and considering the common stock issuances needed to finance production capacity, the management's revised net present value of $603 million pre-tax suggests an intrinsic or current value of $11.50 per share. While this does help peg a target price, it does provide a clear indication that WWR remains undervalued even after recent price increases.

OUTLOOK

There are several catalysts in the near-term that could trigger interest in WWR and move the stock price higher. First, we expect management to disclose some details from the pilot process that could come as early as the first quarter 2021. We also expect the Company to disclose if and when it ships large quantities of PMG for customer qualification exercises. Furthermore management has set a June 2020, target date for completion of a final feasibility study, which should whet shareholder appetite for details. The feasibility study should also provide two critical numbers: an updated project value as well as a more certain capital requirement.

In the longer term, there may also be test results from vanadium exploration activity at the Coosa County resource. After raising sufficient capital in October 2020, we expected additional samples to be taken that will help determine the value that vanadium extraction could add to the Coosa project. Shareholders can also look forward to a hearing by an arbitration panel in September 2021, related to the dispute with the Republic of Turkey. The Company has prevailed at every step in the process thus far and any additional progress is likely to help drive the stock price higher given that Westwater's requested compensation could top $36 million.

It appears that management has delivered on the pilot process as promised. Timely production and completion of a feasibility study by the target date should also help to dissolve some or all or all of the discount for 'uncertainty in performance' that typically weighs on the stock price of developmental stage companies.

Undervaluation and strong catalysts for upward price movement support reiteration of our Speculative Buy rating and $20.00 price target.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST.

Table I: Historic and Projected Annual Financial Performance

Dollars in Thousands	2017A Year	2018A Year	2019A Year	*2020E Year*	*2021E Year*	*2022E Year*
Total revenue	-	-	-	*-*	*-*	*11,025*
Gross profit	-	-	-	*-*	*-*	*5,513*
Operating expenses:						
General and administrative	6,614	7,357	6,086	*6,988*	*8,000*	*8,500*
Product development and other	1,003	333	1,378	*4,646*	*3,750*	*3,750*
Depreciation and amortization	142	116	73	*69*	*80*	*160*
Mineral property expenses	4,584	3,538	2,852	*2,554*	*-*	*-*
Accretion of asset retirement obligations	1,039	993	390	*138*	*-*	*-*
Impairment of mineral properties	11,436	23,712	143	*-*	*-*	*-*
Total operating expenses	24,818	36,049	10.922	*12.943*	*11.830*	*12,410*
Operating income (loss)	(24,818)	(36,049)	(10,922)	*(12,943)*	*(11,830)*	*(6,989)*
Total other income (expense)	5,530	365	357	*6*	*-*	*-*
Income (loss) before income taxes	(19,288)	(35,684)	(10,565)	*(12,937)*	*(11,830)*	*(6,989)*
Discontinued operations, net of taxes	-	-	-	*(6,389)*	*-*	*-*
Unrealized change in value, mkt. securities	287	(861)	-	*-*	*-*	*-*
Realized loss on sale securities	-	484	90	*-*	*-*	*-*
Net income (loss)	(19,001)	(36,061)	(10,475)	*(19,326)*	*(11,830)*	*(6,989)*
Net EPS (LPS), comprehensive	$ (38.50)	$ (38.50)	$ (5.39)	*$ (1.41)*	*$ (0.62)*	*$ (0.20)*
Wtd shares outstanding, diluted in 000s	495	928	1,961	*9,200*	*19,000*	*34,000*

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ANALYST

Debra Fiakas, CFA is a seasoned, credentialed investment professional with a diversified and successful track record as a research analyst and as an investment banker. Her decade-plus career includes solid experience in all aspects of the equity capital markets with particular emphasis on emerging growth companies operating in the technology sectors. Ms. Fiakas is also the principal member of Crystal Equity Research, LLC.

ANALYST CERTIFICATION

The analyst who is primarily responsible for this research and whose name is listed first on this front cover certifies that: 1) all of the views expressed in this research accurately reflect his or her professional views about any and all of the subject securities or issuers, and 2) no part of any of the analyst's compensation was, is or will be directly or indirectly related to the specific rating expressed by analyst in this research.

RATING SYSTEM

Buy	Price appreciation expected 10% or more over a 12-month period.
Hold	Price appreciation/depreciation expected between 10% and –10% over 12 months.
Sell	Price depreciation expected 10% or more over a 12-month period.

CRYSTAL RESEARCH UNIVERSE

Buys	65%
Holds	20%
Sells	15%
Total	100%

HISTORICAL RECOMMENDATIONS AND TARGET PRICE: Westwater Resources / WWR

Report	Date	Price	Rating	Target Price
Previous reports by request				
Update	11/19/19	$2.79	Buy	$30.00
Update	2/25/20	$1.96	Buy	$30.00
Update	4/14/20	$1.00	Buy	$30.00
Update	5/20/20	$1.78	Buy	$30.00
Update	8/17/20	$2.05	Buy	$30.00
Update	9/15/20	$1.81	Buy	$30.00
Update	11/19/20	$5.09	Buy	$20.00

DISCLOSURES

Name	Symbol: Exchange	Disclosures
Westwater Resources, Inc.	WWR: Nasdaq	D

Disclosure Key

A A member or employee of Crystal Equity Research, LLC serves on the board of directors of the company.
B A controlling member of Crystal Equity Research, LLC has a beneficial interest in the common stock of the company.
C A person or persons preparing this report or an immediate family member of the preparer has a beneficial interest in the common stock of the company.
D Crystal Equity Research, LLC received compensation for research coverage from the company or one of its agents. The fees are paid in advance in cash.
E The company has a convertible issue outstanding.
F The securities covered in this report can be optioned.
G The securities covered in this report can be margined.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST