

WWR / Nasdaq

**SPECULATIVE
BUY**

Unchanged

\$20.00

(Reiterated 2/22/21)

CAPITALIZATION

Shares Outstanding (2/5/21)	29.4 M
Recent Price (2/22/21)	\$6.97

Market Capitalization	\$205.0 M
+ Debt	0.0 M
- Cash	50.3 M
Enterprise Value	\$154.7 M

Book Value	\$ 57.5 M
Working Capital	\$ 48.3 M
Dividend	Nil

Balance sheet figures as of 12/31/20

MARKET DATA

Bid-Ask Spread, % Price	0.5%
52 Week High/Low	\$14.50 - \$0.25

Shares Outstanding	29.4 M
Inside Ownership	<1%
Institutional Ownership	65.0%
Estimated Flotation	25.5 M

Average Daily Volume	8.8 M
Short Interest, % of Float	15.3%
Beta	1.70

Source: Bloomberg LP

INVESTMENT RETURNS

	WWR	Sector*
Return on Equity	Neg	9.96%
Return on Assets	Neg	3.79%
Return on Capital	Neg	6.78%

Source: Crystal Equity Research, CSI Markets

FINANCIAL PROFILE

	FY19	FY20
Sales	\$ 0.0 M	\$ 0.0 M
EBITDA	(\$10.3) M	(\$13.8) M
(L)EPS	(\$5.39)	(\$2.68)

Source: Company Reports

HIGHLIGHTS

- **Capital raise.** Mid-February 2021, Westwater Resources reported approximately \$101 million in cash resources following a series of private common stock sales; going concern caution dropped.
- **Graphite process pilot test.** Pilot testing of proprietary graphite materials process technology and plant design on schedule for completion in early 2021. Output of 10,000 kilograms of battery-grade graphite reserved for qualification testing by prospective customers.
- **Final feasibility study.** Pilot test data to inform a final feasibility study of Westwater's Alabama graphite mine and processing plant; expected to be completed by June 2021.
- **Rating.** Speculative Buy rating is reiterated as management executes on schedule with strategic plans for graphite asset; adequate capital resources put commercialization goals within reach.
- **Stock price catalysts.** Pilot test and feasibility study announcements should expected in next few months; should help propel the stock toward our target price of \$20.00.

Debra Fiakas, CFA
Security Analyst
212-400-7519
dfiakas@crystalequityresearch.com

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INDUSTRY: INDUSTRIAL, ENERGY MATERIALS

WWR: NASDAQ

RECENT DEVELOPMENTS

Energy materials developer Westwater Resources is now found in the enviable position of capital sufficiency - at least for the next two years. With common stock placement agreements already in place, the Company was able to move swiftly to take advantage of favorable price movements beginning in October 2020 and through February 2021. After the stock price languished near under \$2.00 per share for months in early 2020, the stock was boosted by favorable trends in the U.S. equity market that propelled valuation metrics and increased trading volumes. Over the four months ending January 2021, the Company was successful in raising \$104.2 million at prices well over \$5.00 per share.

The Company now has over \$100 million in its cash kitty. During the conference call to discuss year-end 2020 financial results, management suggested the current cash resources are sufficient for working capital through the end of the year 2022 with the potential for some allocation to the budget for Westwater's graphite materials processing plant planned for construction in Coosa County, Alabama. A pilot test of the Company's proprietary graphite materials process is underway to supply data for a final feasibility study of the graphite project. In turn the feasibility study, which has already commenced, will provide a detailed budget for the graphite processing plant as well as the adjacent graphite mining operation planned for 2028. Additionally, the study will provide a thorough analysis of economic viability of the project.

RECOMMENDATION

Some shareholders may have been troubled by the increase in Westwater's total shares outstanding to 29.4 million compared to 3.3 million shares outstanding at the end of 2019. While no astute investor likes dilution, capital resources are required for successful execution on Westwater's plan to become the first domestic source of graphite in eighty years. If accomplished, we believe Westwater could be placed in a highly visible position in the energy materials market as the sole domestic source of a mineral recognized as critical by the U.S. government. We expect this first-to-market accomplishment to be pivotal in future market penetration and a strong driver of long-term value.

In our view, in the near-term it will not be quarter reports that fire up investors for WWR shares. Instead, we expect attention-getting announcements from Westwater as the pace of activity in Westwater's graphite development projects accelerate. The Company is on schedule to reach key milestones in 2021. We expect announcements related to the completion of the Company's graphite materials pilot process sometime in early 2021 and the publication by June 2021 of a final feasibility study for the Alabama graphite mine and minerals processing plant.

We continue to rate WWR at Speculative Buy with a \$20.00 price target.

VALUATION

Price/Sales	Neg
Price/Cash Flow	Neg
Price/EPS	Neg
Price/Book Value	2.7 X
Consensus EPS 2020	na
Forward PE	na

Per share figures estimated 2/5/21

OPERATING PROJECTIONS

	<u>2018A</u>	<u>2019A</u>	<u>2020A</u>	<u>2021E</u>	<u>2022E</u>
Sales	\$ 0.0	\$0.0	\$ 0.0	\$ 0.0	\$ 0.0
Operating (Loss)	(\$ 36.0)	(\$ 6.3)	(\$11.2)	(\$ 11.3)	(\$ 6.9)
Net Inc (Loss)	(\$ 36.7)	(\$10.6)	(\$23.6)	(\$ 11.8)	(\$ 6.9)
CFO (U)	(\$ 11.7)	(\$10.0)	(\$15.2)	(\$ 15.9)	(\$ 5.9)
EPS (LPS)	(\$38.50)	(\$5.39)	(\$2.68)	(\$0.40)	(\$0.15)

Dollars in millions except per share earnings

Company Reports and Crystal Equity Research Estimates

YEAR 2020 HIGHLIGHTS

The third week in February 2021, Westwater Resources reported financial results for the fourth quarter and year ending December 2020. Still in non-commercial stage with its graphite asset development, the Company reported total operating expenses for the year \$11.2 million and an operating loss of the same amount. This compared to \$6.3 million in operating spending and loss in the previous year. Expenses in the year 2020 included an incremental \$4.0 million in product development expenses related to the ongoing test of the Company's proprietary graphite materials process technology and plant design.

The report summed up a year of dramatic change for the Company, including the divestiture of uranium assets and the reversion of lithium exploration licenses that have left the Company exclusively focused on graphite asset development. Arguably, the most important disclosures in the reports related to changes in the Company's balance sheet and cash flows rather than in the operating loss for the year 2020.

Streamlined Balance Sheet After Asset Sale

Following the sales of the Company uranium assets in December 2020, property, plant and equipment net of accumulated depreciation was reduced to \$9.0 million from \$20.6 million at the end of the previous year. A charge of \$9.2 million was recorded at the end of the year for the loss on the divested uranium operation, including \$5.2 million for the impairment of the uranium assets. Based on the selling price and the book value of the assets, Westwater also reported a \$2.7 million loss on the sale. Additionally, \$3.7 million in restricted cash related to performance bonds for the Texas uranium operations were eliminated through the transaction. Along with the operating loss for the year 2020, divestiture of the uranium assets increased the Company's accumulated deficit to \$326.0 million.

Capital Raise Funds Working Capital Through 2022

Westwater reported \$50.1 million in cash and equivalents on December 2020 balance sheet. However, during the earnings conference call that followed the press release management disclosed additional capital had been raised since the beginning of 2021, bringing cash resources to \$101 million as of early February 2021.

Over the last year the Company had negotiated renewals and increases in common stock purchase agreements with private equity and investment banking institutions. One of the most important advantages of such arrangements is the ability to raise capital when the stock is trading with strength and thus most favorable for minimizing dilution. Over the five months beginning October 2020, the U.S. equity market delivered exactly such conditions to Westwater. Valuations were positively impacted by exceptional liquidity spurred by U.S. Federal Reserve programs to bolster the U.S. economy. Despite unemployment and business interruption from the coronavirus pandemic, work-at-home policies also triggered sector rotations into several sectors, including those related to renewable energy technologies.

In 2020, the Company sold a total of 15.7 million shares in 2020, to raise \$62.7 million in new capital. Then in the first five weeks of 2021, the Company raised an additional \$53.9 million through the sale of 10.2 million shares. The various common stock sales have brought total shares outstanding to 29.5 million compared to 3.3 million shares outstanding at the end of 2019.

We estimate the Company was able to sell shares at an average price of \$5.72 per share in the final three months of 2020 and then in the first six weeks of 2021, sold shares at an average of \$5.28 per share. We believe that if the stock price had remained unchanged from levels observed in early 2020, the raise of an equivalent amount of capital through stock sales would have resulted in more than double the dilution.

During the earnings conference call management indicated that capital resources are now sufficient to support planned operations through the end of 2022, including the completion of a final feasibility study for the Alabama graphite project and battery grade graphite processing plant. The study is due mid-2021. It was also suggested that current capital resources could also cover at least a portion of the funds needed for construction of the graphite materials processing plant.

The balance of the project financing required to construct the graphite processing plant could be raised at least in part through the equity placement agreements. The balance remaining under the Company's stock placement arrangements as of February 2020, was an estimated \$94 million. Given the current level of working capital, we do not expect management to move unnecessarily to sell additional common stock shares unless the prevailing stock price is particularly favorable. Instead, we expect management to use feasibility study conclusions to seek project financing such as equipment leases or debt. Strategic partnership could also be on the table, in our view.

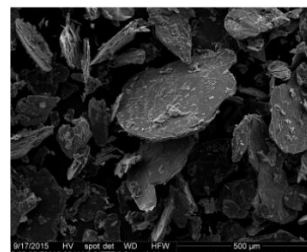
GRAPHITE MATERIALS PILOT TEST

During the earnings conference call that followed the year-end 2020 financial release, management indicated near completion of pilot tests for the Company's proprietary process for battery-grade graphite materials. By the end of the quarter ending June 2020, the Company expects to have produced at least 10,000 kilograms of *Purified Micronized Graphite* or *PMG* material for use by prospective customers for performance and qualification testing.

The pilot tests could be crucial in a successful launch of commercial operations. Pilot testing of technologies and processes allow operators to find possible flaws in design. The experience also helps guide the scale-up to commercial production. Perhaps most important the pilot tests provide data on how to increase efficiency and improve yields.

Data from the pilot program will also be used to inform the definitive feasibility study that is currently underway. The feasibility study will determine whether the graphite resource in Alabama can be mined economically and provide guidance on the capital and operating budget needed to process the graphite into battery grade materials. The conclusions will be critical in securing the required financing to complete construction of the processing plant in 2022.

Our earnings model for Westwater Resources has been updated to reflect the financial results for the full year 2020. During the earnings call management provided guidance for operational spending in 2021 at levels equal to or greater than observed in 2020. We have adjusted our cost and spending estimates for 2021 to reflect this guidance. Of course, we continue to expect no sales activity in 2021 and thus anticipate a reported net loss and net usage of cash resources to support operations.



We note there are several specific stock price catalysts in the next few months that should win investor interest, including:

- Completion of the pilot graphite process tests and disclosure of results.
- Publication of a final feasibility study for the Alabama natural flake graphite mine and a nearby graphite processing plant.
- Customer decisions to source purified micronized graphite from Westwater.
- Next steps in Westwater's claim before international arbitration panel against the Republic of Turkey related to confiscation of uranium licenses in that country.

GRAPHITE INDUSTRY DEVELOPMENTS

Focused exclusively on graphite, developments in the market take on a new significance in Westwater's risk profile. Current world natural flake graphite production is now 500,000 metric tons per year. A number of developers have been in a race to bring new flake graphite projects to commercial stage. Some are like Westwater, aspiring to sell a refined graphite material directly to end users in the battery market.

- Mineral Commodities Ltd. (MRC: ASX) has been granted permission to expand graphite exploration in Norway for the six years beginning January 2021. The company claims its Skaland graphite mine is already producing the highest grade natural flake graphite in the world. Its new exploration targets are about fifteen kilometers southeast of the current operation. Mineral Commodities currently sells graphite concentrate, but eventually plans production of purified graphite. A pre-feasibility study of a battery anode material production plant and process was completed in September 2020.
- Nouveau Monde Graphite (NOU: TSX-V, NMGRF: OTCQX) has received an environmental permit from the Quebec government for construction of a graphite mine near Montreal. Construction is to begin the second quarter 2021. The company indicates full scale mining activity is expected to begin the second half of 2023. Eventually Nouveau Monde will build a facility to produce as much as 40,000 metric tons per year of spherical purified graphite. To get the ball rolling the company raised CA\$5.75 million in early February 2021, following another capital raise of CA\$12.0 million in November 2020.
- Tirupati Graphite Plc. (TGR: LON) is expanding flake graphite production at its Vatomina and Sahamamy projects in Madagascar. When the new production comes on-line in 2024, Tirupati plans on producing expandable, high purity, micronized and spherical graphite.
- Volt Resources Ltd. (VRC: ASX) is acquiring 70% interest in the Zabalievsky Graphite mine in Ukraine, which has been in operation for several decades. Volt's graphite portfolio already includes the Bunyu graphite project in Tanzania, which remains under development. Volt recently completed a private placement, raising \$3.0 million in new capital to support the deal and working capital.

Graphite Demand Drivers

The transition from fossil fuel-based power generation to clean energy technologies portends an intensification in demand for a number of minerals. Battery storage technologies are particularly reliant on a mix of common and exotic minerals. Graphite leads in mineral demand from the energy storage market. Among a dozen energy minerals that are typical battery components, graphite represents over half the requirement.

After a lull in 2020 due to the coronavirus pandemic, demand growth has resumed as individuals, business and industry through their support behind renewable energy. Sources such as solar and wind power require ample storage capacity to smooth out intermittent production. Adoption of electric vehicles is yet another vital driver of demand for lithium-ion batteries. According to Benchmark Mineral Intelligence just one electric vehicle requires between 40 kilograms (88 pounds) to 60 kilograms (132 pounds) of graphite material.

In late 2020 industry research firm Wood Mackenzie issued new estimates that the global lithium-ion cell manufacturing capacity could increase by four times to reach 1.3 terawatt hours by 2030. By then the industry could consist of more than four dozen manufacturers operating at 119 facilities. The lithium-ion battery market is dominated by five manufacturers: 1) Panasonic Energy of North America, 2) LG Chem of Michigan, 3) A123 Systems, 4) EnerSys, and 5) Samsung SDI Company.

Alkaline Batteries

Westwater is targeting the whole of the battery market, alkaline batteries as well as lithium-ion technologies. Alkaline batteries are non-rechargeable batteries that offer steady voltage and high energy density. They find their way into all manner of commercial, personal and household electronic devices. According to Fortune's Business Insights the global alkaline battery market was valued at \$7.5 billion in 2019 and could reach \$10.7 billion by 2027. The implied growth rate is 4.8% annually for five years.

Electrodes in alkaline batteries are usually made of zinc and manganese with graphite as a performance enhancement additive for the cathode. The segment is dominated by Duracell, Inc., Energizer Holdings, Panasonic, and Toshiba. Camelion Batterien GmbH, Spectrum Brands and Gold Peak Industries Ltd. are also mentioned among industry leaders. That said, technology innovations are giving others new footholds in the segment, including Excell Battery Company in Canada, General Motor's ACDelco, Dongguan Sunmol Battery Company, and Japan's Nippo Corporation.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST

Table I: Historic and Projected Annual Financial Performance

Dollars in Thousands	2018A *	2019A *	2020E	2021E	2022E
	Year	Year	Year	Year	Year
Total revenue	-	-	-	-	11,025
Gross profit	-	-	-	-	5,513
Operating expenses:					
General and administrative	7,357	6,086	5,678	8,000	8,500
Product development and other	333	1,378	5,378	3,750	3,750
Depreciation and amortization	116	73	(55)	80	160
Mineral property expenses	3,538	2,852	34	-	-
Accretion of asset retirement obligations	993	390	201	-	-
Impairment of mineral properties	23,712	143	-	-	-
Total operating expenses	36,049	10,922	11,236	11,830	12,410
Operating income (loss)	(36,049)	(10,922)	(11,236)	(11,830)	(6,989)
Other income and expenses					
Gain (loss) on sale of assets	104	729	(2,665)		
Other	261	(372)	(11)		
Total other income (expense)	365	357	(2,676)	-	-
Income (loss) before income taxes	(35,684)	(10,565)	(13,912)	(11,830)	(6,989)
Discontinued operations, net of taxes	-	-	(9,662)	-	-
Unrealized change in value, mkt. securities	(861)	-	-	-	-
Realized loss on sale securities	484	90	-	-	-
Net income (loss)	(36,061)	(10,475)	(23,574)	(11,830)	(6,989)
Net EPS (LPS), comprehensive	\$ (38.50)	\$ (5.39)	\$ (1.58)	\$ (0.40)	\$ (0.17)
Wtd shares outstanding, diluted in 000s	928	1,961	8,799	29,600	42,000

* Years 2018 and 2019 are displayed as originally reported and do not reflect the uranium operations as discontinued operations.

Source: Company Reports and Crystal Equity Research Estimates

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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.

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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	70%
Holds	15%
Sells	15%
Total	100%

HISTORICAL RECOMMENDATIONS AND TARGET PRICE: Westwater Resources / WWR

<u>Report</u>	<u>Date</u>	<u>Price</u>	<u>Rating</u>	<u>Target Price</u>
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
Update	2/23/21	\$6.97	Buy	\$20.00

DISCLOSURES

<u>Name</u>	<u>Symbol: Exchange</u>	<u>Disclosures</u>
Westwater Resources, Inc.	WWR: Nasdaq	D

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- 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.

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