

WWR / Nasdaq

**SPECULATIVE  
BUY**

Unchanged

**\$30.00**

(Revised 5/6/19)

**CAPITALIZATION**

Shares Outstanding (4/23/19)	1.5 M
Recent Price (5/3/19)	\$7.25

Market Capitalization	\$10.9 M
+ Debt	0.0 M
- Cash	1.6 M
Enterprise Value	\$ 9.3 M

Book Value	\$20.8 M
Working Capital	\$ 1.0 M
Dividend	Nil

Balance sheet figures as of 12/31/18

**MARKET DATA**

Bid-Ask Spread, % Price	1.4%
52 Week High/Low	\$30.00 - \$5.36

Shares Outstanding	1.5 M
Inside Ownership	<1%
Institutional Ownership	15.0%
Estimated Flotation	73.7 M

Average Daily Volume	85 K
Short Interest, % of Float	Nil
Beta	0.98

Source: Bloomberg LP

**INVESTMENT RETURNS**

	WWR	Sector*
Return on Equity	Neg	18.8%
Return on Assets	Neg	7.5%
Return on Capital	Neg	10.0%

Source: Crystal Equity Research, CSI Markets

**FINANCIAL PROFILE**

	FY17	FY18
Sales	\$ 0.0 M	\$ 0.0 M
EBITDA	(\$12.2) M	(\$11.2) M
EPS	(\$0.78)	(\$0.77)

Source: Company Reports

**HIGHLIGHTS**

- **Uranium opportunity.** A decision Office of U.S. President on uranium import tariffs or quotas could remove uncertainty in pricing that may have stalled negotiations on supply contracts with U.S. nuclear power producers.
- **Lithium asset development.** Water rights received for Sal Rica lithium project in western Utah, creating new value in asset.
- **Vanadium asset development.** Technical Report expected before end of May 2019, related to vanadium resource at the Coosa County graphite project. Vanadium expected to increase margins when mining operations begin in 2026.
- **Graphite materials advances.** Independent tests of both the Company's coated and uncoated spheronized purified graphite material showed impressive results on long-cycling tests.
- **Reverse stock split.** In late April 2018, shareholders approved a 50-to-1 reverse stock split to help stave off delisting by the Nasdaq National Market. Our price target is updated to reflect the split.
- **Registration filing.** Westwater Resources is poised to raise capital through an offering of common shares..

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## INDUSTRY: INDUSTRIAL, ENERGY MATERIALS

## WWR: NASDAQ

## RECENT DEVELOPMENTS

There has been a mix of current events for energy materials developer Westwater Resources. The Company filed a registration statement to sell an unspecified number of common stock shares and warrants. Proceeds would be used to support continued work on the Company's Coosa County graphite project as well as exploration of lithium assets in Nevada and Utah. The capital raise comes on the heels of several value-adding accomplishments in the Company's resource portfolio, including 1) discovery of significant vanadium resources at the Coosa County project, 2) successful long-term cycling tests of battery-grade graphite made from the Coosa graphite and 3) award of water rights at the Sal Rica lithium project in Utah.

The Company is ready to move forward yet in 2019 with a pilot plant for producing battery-grade material from Coosa graphite. The pilot plant is expected to produce low-volumes in 2020, for customer testing purposes and eventual commercial sales. The Company also plans to test a specialized furnace for purifying graphite in the near-term. The test results will inform the final graphite processing design and equipment selection.

## RECOMMENDATION

We continue coverage of Westwater with a Speculative Buy rating and a one-year target price of \$30.00 based on an estimated intrinsic value of \$47.00 per share and tempered by recent trading patterns. In our view, WWR is undervalued given promising demand conditions in the Company's end markets, strong minerals asset portfolio, competitive technology and knowhow, and potential to return to profitable operations within as few as three years. The Company has made considerable progress in recent months, adding value to its graphite and lithium resource assets as well as preserving value at its Texas uranium assets.

We expect several valuation catalysts for the stock to unfold over the next several months, including progress reports on construction of a graphite materials pilot plant, issuance of a technical report for the vanadium asset at the Coosa County graphite project, and results of exploration in Westwater's lithium assets. Additionally, investors may find solace in the raise of capital through a pending common stock and warrant offering. While the offering may be dilutive to shareholders, the capital infusion could put greater certainty in executing on the various graphite, vanadium and lithium projects. All these projects require significant investment to move onto the next state and eventually reach commercial production.

## VALUATION

Price/Sales	Neg
Price/Cash Flow	Neg
Price/EPS	Neg
Price/Book Value	0.50 X
Consensus EPS 2019	na
Forward PE	na

Per share figures estimated 12/31/18

## OPERATING PROJECTIONS

	<u>2017A</u>	<u>2018A</u>	<u>2019E</u>	<u>2020E</u>	<u>2021E</u>
Sales	\$ 0.0	\$0.0	\$ 0.0	\$ 0.9	\$ 16.9
Operating (Loss)	(\$ 24.8)	(\$36.0)	(\$12.1)	(\$ 14.7)	(\$ 13.7)
Net Inc (Loss)	(\$ 19.0)	(\$35.7)	(\$ 12.1)	(\$14.7)	(\$ 13.7)
CFO (U)	(\$ 11.6)	(\$11.7)	(\$ 8.9)	(\$10.6)	(\$12.4)
EPS (LPS)	(\$38.50)	(\$38.50)	(\$8.00)	(\$7.50)	(\$6.50)

Dollars in millions except per share earnings

Company Reports and Crystal Equity Research Estimates

## MARKETS

There has been progress in the various markets Westwater Resources addresses with its mineral asset portfolio. After a challenging year 2018 when the Company suffered confiscation of its Turkey uranium mining asset, the recent developments appear more favorable.

### Uranium Opportunity

The U.S. Department of Commerce has completed its investigation of uranium imports to the U.S. and has delivered a report to the Office of the President on whether uranium imports undermine domestic production and national security. The President's office will have until mid-July 2019, to decide whether to impose quotas or tariffs to counter any import threats. The investigation was triggered by a complaint filed by two U.S. uranium producers.

The U.S. power industry consumes far more uranium than it produces, relying heavily on imported yellowcake supplies as fuel for nuclear power plants. With uranium prices at historic lows, there is very little, if any, current uranium production in the U.S. Like Westwater, domestic producers are waiting for more favorable price conditions to bring uranium mining operations back into action.

The roll-off of a large number of long-term supply contracts with major U.S. utility companies has been intensely anticipated by producers around the world. We believe the import complaint and the Department of Commerce investigation may have delayed contract negotiations as the utility industry has waited for clarity on quotas and tariffs. Whatever the final decision on tariffs or quotas, the decision should give utilities a better foundation for locking in supply agreements.

In the meantime, the new uranium holding companies continue to speculate on future uranium prices. In mid-April 2019, London-based Yellow Cake bought another 1.175 million pounds of uranium from KazAtomProm for US\$25.88 per pound.

We view these developments as generally favorable for Westwater. Greater certainty in pricing and an acceleration of customer contracting activity should bring the Company closer to a re-entry to the uranium market with its Texas assets.

### Lithium Asset Value Creation

Water rights were granted by the State of Utah for Westwater's Sal Rica lithium project in western Utah. In our view, this is a value-creating accomplishment.

Access to water is vital for conventional lithium brine operations. The water rights make it possible for the Company to move forward with plans to extract lithium from the Sal Rica property or sell the mining asset along with the water rights to another party. The mining assets would certainly garner a higher price with the water rights attached. It might also be possible to sell water to neighboring interests for mining or agriculture purposes, which could bring in cash flow while the Company prepares its lithium extraction operation.

### Vanadium and Graphite Asset Development

In early April 2019, the Company announced that sampling activity in the Company's Coosa County, Alabama asset has yielded five new vanadium and graphite target areas. An exploration plan is underway to further quantify exploitable vanadium resources at the Coosa project. A technical report detailing the exploration plan is expected by the end of May 2019.



As previously announced, sampling activity had determined that significant vanadium deposits exist within the known graphite mineralization. The Company made plans to quantify the vanadium resource and explore alternatives to mine vanadium as a second product at the Coosa graphite project. Management has estimated the exploration plan could require a \$950,000 budget to support for drilling and sampling in 2019, followed by another \$100,000 in incremental expenses to update the mineral resource model to include vanadium.

In our view, quantification of the vanadium resource has added value to the Company's Coosa County project. The incremental processing of vanadium will require additional equipment. However, we expect the vanadium to garner selling prices that will more than offset the additional expense and contribute strong operating profits to the project when the Company begins mining operations.

### Graphite Materials Advances

An independent party has put Westwater's battery-grade graphite materials to the test. The Company's *Coated Spherical Purified Graphite (CSPG)* made from graphite from the Coosa County graphite project was subjected to long-term cycling tests. The test showed that improvement has been made in the irreversible capacity loss compared to tests completed three years ago.

Irreversible capacity loss in graphite anodes of lithium-ion batteries occurs as the battery is charged and discharged, causing the operating voltage of the graphite anode to be below the reduction voltage of the electrolyte. Eliminating such capacity loss is crucial for efficient battery operation and reduction in cost for lithium ion applications such as electric vehicles.

Uncoated, spherical purified graphite from the Coosa project was also tested by an independent party under prolonged cycling conditions. The material demonstrated stable performance over 150 cycles. Likewise irreversible capacity loss was low.

In our view, the test results demonstrate that the Westwater team with its various engineering consultants is making progress with battery-grade graphite materials development. We believe the testing activity could provide strong testimony to prospective battery materials customers.

## HIGHLIGHTS FROM REGISTRATION FILING

In late April 2019, Westwater Resources filed a registration statement with the U.S. Securities and Exchange Commission for the issuance and sale of an unspecified number of common stock shares and warrants. The filing followed by one day the reverse split of the Company's common stock by 1-for-50 shares that left 1.5 million shares outstanding.

Following are several key disclosures and noteworthy commentary in the registrations statement:

- Growth strategy more clearly focused that ever on development of battery-grade graphite materials from the Coosa County graphite project. However, geologic evaluation of lithium exploration projects in Nevada and Utah receives new emphasis in 'management's analysis and discussion,' demonstrating that lithium development is also a high priority.
- Management remains committed to building a pilot-scale processing plant for battery-grade graphite material yet in 2019, and beginning operations to produce low volumes in 2020. A commercial-scale plant would be built beginning in 2020 with operations beginning in 2022.
- The Company plans to conduct a pilot plant study yet in 2019, to verify the use of a fluidized-bed electrothermal furnace for purification of the graphite concentrate mined from the Coosa County project as well as purchased natural flake graphite. The pilot plant study results could be used in designing a full-scale furnace planned for construction beginning in 2020.
- The Coosa graphite project and lithium exploration projects are specifically cited for use of proceeds of the common stock offering.
- The Company had raised approximately \$2.2 million in cash in the first four months of 2019, through 1) collection on a promissory note from Laramide Resources, 2) sales of common stock through the Cantor Fitzgerald equity sales agreement, and 3) sale of certain assets to Uranium Royalty Corporation. At the end of March 2019, the Company had \$1.0 million in cash on the balance sheet compared to \$1.6 million three months earlier. Approximately \$2.25 million remains due from Uranium Royalty pending completion of due diligence on the various assets Uranium Royalty is buying from Westwater.
- There is no minimum offering amount. We expect this nuance to give Westwater Resources management complete latitude in the capital raise. Depending upon how favorable market price, management may be able to limit dilution or maximize the capital raise.

## VALUATION AND OUTLOOK

We continue to rate WWR shares as speculative buy. Our target price has been adjusted to \$30.00 per share to reflect the reverse split as well as changes in net assets. Again we take a practical approach to setting our target price by observing historic trading patterns. Our revised target price reflects the new 52-week high price following the reverse stock split, which we believe may represent a line of price resistance.

Notably this new target price is lower than our previous valuation of the Company based on a multiple of book value using comparable metrics in the industrial materials industry. With adjustments to reflect recent share issuance and changes in the Company's assets and liabilities, the method suggests a price of \$47.00 per share. We view the foregoing valuation as a base case scenario in as much as it reflects a complete loss of the Turkey uranium mining assets and no compensation by Turkey. We plan to revisit the valuation topic following report of the Company's first quarter financial results.

In our view, the share price does not fully reflect the fundamental progress of the Company. We have noted several value-creating events in recent months, the importance of which appear to have been ignored by investors. We believe the shares have been negatively impacted by pessimistic sentiment arising from the loss of the Turkey uranium asset and continued capital constraint that appears to be delaying progress in the Company's strategic plans for graphite and lithium assets. Clearly these concerns are valid, but should not be considered to the exclusion of incremental progress in developing the mineral resource assets.

**ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST.**

Table I Historic and Projected Annual Financial Performance

Dollars in Thousands	2014A Year	2015A Year	2016A Year	2017A Year	2018A Year	2019E Year	2020E Year	2021E Year	2022E Year
Total revenue	-	-	-	-	-	-	900	16,900	84,750
Operating expenses:									
Mineral property expenses	3,502	4,470	3,248	4,584	3,538	3,800	5,500	6,000	6,500
General and administrative	9,132	7,488	7,650	6,614	7,357	7,500	8,500	9,000	10,500
Accretion of asset retirement obligations	425	450	480	1,039	993	600	1,000	1,000	1,000
Depreciation and amortization	331	336	247	142	116	160	160	160	160
Impairment of mineral properties	160	960	1,673	11,436	23,712	-	-	-	-
Other	-	3,048	-	1,003	333	-	-	-	-
Total operating expenses	13,550	16,752	13,298	24,818	36,049	12,060	15,160	16,160	18,160
Operating income (loss)	(13,550)	(16,752)	(13,298)	(24,818)	(36,049)	(12,060)	(14,710)	(13,710)	6,040
Other income (expense)									
Interest income	-	-	-	614	735	-	-	-	-
Interest expense	(2,368)	(2,645)	(2,800)	-	-	-	-	-	-
Gain on derivatives	2,919	-	-	-	-	-	-	-	-
Gain on uranium properties	2,313	4,268	-	4,927	104	-	-	-	-
Loss on extinguishment of convertible debt	-	-	(3,322)	(39)	-	-	-	-	-
Other, net	2	(14)	(185)	28	(474)	-	-	-	-
Total other income (expense)	2,866	1,609	(6,307)	5,530	365	-	-	-	-
Income (loss) before income taxes	(10,684)	(15,143)	(19,605)	(19,288)	(35,684)	(12,060)	(14,710)	(13,710)	6,040
Provision for income taxes (benefit from)	-	-	-	-	-	-	-	-	1,812
Unrealized change in value, mkt. securities	-	(67)	(49)	287	(861)	-	-	-	-
Realized loss on sale securities	-	-	116	-	484	-	-	-	-
Net income (loss)	(10,684)	(15,210)	(19,538)	(19,001)	(36,061)	(12,060)	(14,710)	(13,710)	4,228
Net EPS (LPS), comprehensive	na	na	na	\$ (38.50)	\$ (38.50)	\$ (8.00)	\$ (7.50)	\$ (6.50)	\$ 2.00
Wtd shares outstanding, diluted in 000s	na	na	na	495	928	1,537	2,122	2,132	2,172

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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

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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	5%
Sells	<u>25%</u>
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>
Initial	4/10/18	\$0.53	Buy	\$1.50
Update	5/24/18	\$0.42	Buy	\$1.50
Update	7/2/18	\$0.40	Buy	\$1.50
Update	8/14/18	\$0.30	Buy	\$1.50
Update	11/13/18	\$0.20	Buy	\$1.50
Update	12/20/18	\$0.16	Buy	\$1.50
Update	2/26/19	\$0.14	Buy	\$1.50
Update	5/6/19	\$7.25	Buy	\$30.00 Post reverse split



**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.

\* *Crystal Equity Research previously published research on Alabama Graphite and received compensation from the company.*

**ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST**

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