CRYSTAL EQUITY RESEARCH

WESTWATER RESOURCES, INC.

Update Report

May 20, 2020

WWR / Nasdaq

SPECULATIVE BUY

Unchanged

$30.00

(Affirmed 5/20/20)

CAPITALIZATION	
Shares Outstanding (2/14/20)	5.6 M
Recent Price (5/19/20)	$1.78
Market Capitalization	$ 9.9 M
+ Debt	0.0 M
- Cash	0.9 M
Enterprise Value	$ 9.0 M
Book Value	$ 16.2 M
Working Capital	($ 2.2) M
Dividend	Nil

Balance sheet figures as of 3/31/20

MARKET DATA	
Bid-Ask Spread, % Price	6.0%
52 Week High/Low	$9.25 - $0.25
Shares Outstanding	5.6 M
Inside Ownership	<1%
Institutional Ownership	10.0%
Estimated Flotation	5.5 M
Average Daily Volume	153 K
Short Interest, % of Float	Nil
Beta	1.73

Source: Bloomberg LP

INVESTMENT RETURNS	WWR	Sector*
Return on Equity	Neg	7.9%
Return on Assets	Neg	3.25%
Return on Capital	Neg	4.95%

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

- **Graphite project**. Work on a pilot plant to produce low-volume quantities of battery-grade graphite material have so far continued uninterrupted during the coronavirus pandemic.
- **Capital resources.** Shareholders recently authorized the issuance additional shares to Lincoln Park Capital, paving the way for a renewal of a common stock placement agreement and the raise of up to $12 million in new capital.
- **Uranium license arbitration**. Turkey must file a written response by mid-July 2020 to Westwater's claim for compensation for a revoked uranium mining license. A hearing on the matter can now be scheduled in September 2021.
- **Undervaluation**. Current valuation multiples in a group fo energy minerals developers and producers suggest the WWR intrinsic value is near $8.05, well above the current share price.
- **Outlook**. Management has promised timely updates on progress with a planned graphite processing pilot plant, news of which could serve as a catalyst for the share price.

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INDUSTRY: INDUSTRIAL, ENERGY MATERIALS	WWR: NASDAQ

RECENT DEVELOPMENTS

When Westwater Resources reported financial results for its first quarter ending March 2020, shareholders were given a view on how the coronavirus pandemic impacted the Company in the first months of the crisis. As expected the Company incurred incremental costs associated with keeping its employees safe. Administrative personnel were sent home to work remotely and field workers at the Texas uranium operations were furloughed until work-stoppage policies were lifted in that state. Importantly, the Company's 'front burner' project to commercialize battery-grade graphite has proceeded as planned without interruption as contracted engineers migrated easily to work-at-home conditions. Accordingly the Company remains on schedule to complete design and construction of a low volume graphite production plant and produce one ton of the Company's *Purified Micronized Graphite (PMG)* by 2021.

RECOMMENDATION

Speculative Buy remains our rating for WWR. Unfortunately, our target price of $30.00 remains a distant aim. The stock has traded higher in recent weeks in concert with peers in the uranium sector as renewed interest has been kindled by U.S. policy initiatives favoring domestic production. Nonetheless, valuation of the Company's mineral resource assets suggests an intrinsic value substantially higher than the current price. The stock is currently priced at two-thirds of book value. In our view, investors have only partially recognized the progress Westwater management has made toward commercializing battery-grade graphite material. It is important from a risk assessment standpoint that this initiative is on schedule and that capital is available to get the project to the next step of having an operational pilot plant for low volume production.

VALUATION

Price/Sales	Neg
Price/Cash Flow	Neg
Price/EPS	Neg
Price/Book Value	0.61 X
Consensus EPS 2020	na
Forward PE	na

Per share figures estimated 3/31/20

OPERATING PROJECTIONS

	2017A	2018A	2019A	*2020E*	*2021E*
Sales	$ 0.0	$0.0	$ 0.0	*$ 0.0*	*$ 0.9*
Operating (Loss)	($ 24.8)	($36.0)	($10.9)	*($ 13.1)*	*($ 14.6)*
Net Inc (Loss)	($ 19.0)	($35.7)	($ 10.6)	*($13.1)*	*($ 14.6)*
CFO (U)	($ 11.6)	($11.7)	($ 10.0)	*($11.8)*	*($ 14.2)*
EPS (LPS)	($38.50)	($38.50)	($5.39)	*($1.46)*	*($1.52)*

Dollars in millions except per share earnings

Company Reports and Crystal Equity Research Estimates

FIRST QUARTER 2020 RESULTS

Westwater Resources reported financial results for the quarter ending March 2020, providing insight into the fate of the Company under work-stoppage and stay-at-home orders in areas where it operates. Westwater used $3.5 million in cash resources to support operations during the quarter. Most of the expenses were for general and administrative purposes, including some incremental spending on equipment and supplies for ensuring a healthy and safe work environment. Reported operating expenses, including non-cash items, was $3.3 million.

The Company issued common stock during the quarter to supplement cash resources, raising $2.5 million in new capital and issuing 1.4 million new shares. Since the close of the quarter Westwater was also approved for a loan of $300,000 pursuant to the Paycheck Protection Program (PPP) set up by Congress in March 2020, to assist companies in keeping employees on the roster. The loan is forgiven if the proceeds are used for payroll and benefits. The will be used to support the payroll at the Texas uranium operations and is expected to qualify for forgiveness in the parameters of the PPP. With the $877,000 in cash in the back at the end of March 2020, and proceeds from the PPP loan, we believe the Company has sufficient cash to support operations into June 2020.

IMPORTANT DEVELOPMENTS

Capital Resources

In late April 2020, shareholders approved the requisite share issuance to renew a common stock placement arrangement with Lincoln Park Capital. The existing agreement expiring at the end of May 2020, under which the Company raised $7.7 million by issuing and selling 3.2 million shares. Over the next year we expect Westwater Resources to place additional common stock valued at an incremental $12.0 million through Lincoln Park. We expect the proceeds to be used for regular administrative activity as well as design of a graphite processing pilot plant.

Arbitration Action Against Republic of Turkey

Westwater won a round in its legal action against the Republic of Turkey following that country's revocation in 2018 of the Company's licenses to mine uranium at two locations in Turkey. The Turkey mining authority had promised compensation for the licenses but then failed to proceed with a settlement. Westwater then filed a petition with the International Center for the Settlement of Investment Disputes (ICSID), citing its investment of $36.5 million and detailing additional costs resulting from Turkey's unlawful action. Turkey had asked for a separation of the question of jurisdiction and Westwater's claim. However, in late April 2020, the ICSID panel denied Turkey's request and the matter will now proceed forward. Turkey must file a written response to Westwater's claim by mid-July 2020. A hearing on the matter can now be scheduled in September 2021, providing more certainty in the timeline to resolution.

ESTIMATES AFFIRMED

First quarter 2020 financial results have been incorporated into our earnings model. We made minor changes in operating expenses by adding a generous estimate for costs related to employee safety and health. It is likely that Westwater like every company in the U.S. will need additional equipment and supplies, janitorial services, and paid leave to ensure employees are safe and prepared for work. Our model now reflects the issuance of additional common stock shares over the next year pursuant to the renewed equity placement agreement with Lincoln Park Capital. The model currently assumes an average price of $3.00 per share and the issuance of 4.0 million shares according to the currently proposed terms for the renewal of the Lincoln Park agreement. Accordingly, we caution that the eventual number of shares issued could be significantly impacted by higher or lower stock price over the next year.

VALUATION AND OUTLOOK

We continue to rely on a survey of comparable energy materials companies with publicly traded stock as a guide for valuation of WWR shares. Valuation metrics continue to reflect caution on macroeconomic prospects as most countries have only just started to creep back out from various levels of stay-at-home and work-stoppage mandates. Most investors appear to believe there remains considerable risk as near-term demand has been ravaged by work-stoppage at much of the world's manufacturing base. Consequently, equity valuation metrics reflect a deep discount for uncertainty and risk. The haircut has been applied even to those players like Westwater Resources that have continued with only temporary interruption in regular activities and near seamless transfer of engineering efforts to a distributed workforce at home.

In our view, Westwater Resources share price has been undervalued relative to its peers in the energy materials market. Price multiples of sales, earnings, cash flow and book value have gyrated over the last few months as uncertainty triggered by the health scare and impending recession. The uranium sector has also experienced a recent resurgence in multiples driven by news headlines for the U.S. policy initiatives. Given cessation of uranium operations and pre-revenue stage in the other three metals, the price-to-book value multiple is of most importance in valuing WWR. Current valuation multiples in the group suggest the WWR intrinsic value is near $8.05, well above the current share price.

Using the same metrics and taking into the consideration the planned share issuance pursuant to a renewal of the Lincoln Park Capital equity placement agreement, we estimate the intrinsic value at the end of 2020 would be $7.11. Thus even with the potential dilution of anticipated capital raise activity, WWR share price is depressed relative to others in the energy materials market. We believe it is important to consider that Westwater has moved closer to commercial stage in the battery-grade graphite market than most of the aspiring graphite developers.

Our target of $30.00 based on a line of price resistance that appears in historic trading in WWR shares. The dilutive impact of new share issuance is reflected in intrinsic value. Since new share issuance does not impact historic trading patterns, the target price has again been left unchanged. New share issuance is expected to be accompanied by the lubricating impact of new capital on achievement of strategic objectives. Thus while the target price may appear even further off with the issuance of new shares, an infusion of capital into the Company is expected to drive fundamental value toward the target value.

SECTOR UPDATE

Uranium

The health crisis imposed by spread of a novel, highly virulent coronavirus has disrupted the delicate rebalancing process that has been playing out slowly across of the global uranium supply sector. In March 2011, the nuclear power industry and the uranium supply chain supports it was sent into a tailspin by an earthquake and tsunami that devastated Japan's eastern coast and triggered contamination at the Fukushima Nuclear Power Plant. Nuclear power was suddenly considered too risky, leading to existing plant closures and new plant delays. Demand for uranium evaporated, leaving selling prices for uranium 'yellow cake' at a depressed level ever since.

By the beginning of 2020, the global nuclear utility industry had recovered to the point Industry research firm MarketWatch estimated there would be demand for 182 million pounds of uranium concentrate for reactor operations during the year. As in the last several years uranium production was expected to be well short of that figure as utility companies continue to rely on excess inventories. Only those uranium mining companies with the low marginal cost structure have remained in operation.

Absorbing the second natural crisis event within ten years will not be easy for the uranium supply chain. At the beginning of 2020, MarketWatch had estimated there would be approximately 140 million pounds of production during the year. Before the end of the first quarter that estimate was no longer valid. Most uranium mines ceased operations for several weeks in February, March and April 2020 in compliance with government orders to shutdown all but essential services as a tactic to slow the spread of the coronavirus. Even once operations resumed, production has been impacted by new safety requirements to ensure worker health.

Now MarketWatch is estimating world uranium production could come in closer to 120 million pounds in 2020. After having relied year-after-year on inventories, the uranium consumers may be faced with the first uranium supply short-fall in over a decade. Given that demand for uranium is relatively price inelastic - that is uranium consumers are not particularly sensitive to price changes - many are anticipating higher prices memorialized in supply contracts between utility companies and uranium suppliers.

As this dynamic plays out U.S. uranium producers are also watching domestic government policies. The Trump Administration budget includes a request for $150 million for the U.S. Department of Energy to build a uranium stockpile over the next ten years. Even if the budget request is finally adopted, it is not likely those purchases could impact uranium pricing that typically is set in world commodity markets. Besides triggering a restart of operations at existing operations, an increase in price level could entice developers to accelerate projects for new mines. There are a number of promising properties where work is already underway or could be resumed in short-order. Price appreciation could be stalled by new supply coming along behind the restoration of now-shuttered, but operationally-ready mines.

SELECTED URANIUM DEVELOPMENT PROJECTS

Company	Symbol	Recent Development Progress
ALX Resources Corp.	AL: TSX	Option on Close Lake project in Athabasca area in Saskatchewan
Azarga Uranium	AZZ: TSX	Seeking approvals for construction at Dewey Burdock in South Dakota
Azincourt Energy Corp.	AAZ: TSX	Phase One drilling program at East Preston project in Athabasca area
Cameco Corp.	CCO: TSX	Most development work suspended; holds stake in Close Lake property among other projects headed by junior partners
Denison Mines Corp.	DML: TSX	Work suspended on environmental assessment at Wheeler River in Athabasca area
Energy Fuels, Inc.	UUUU: NYSE	Largest producer in U.S. at White Mesa Mill in Utah and Nicholas Range in Wyoming; Alta Mesa in Texas on stand-by
Fission Uranium Corp.	FCU: TSX	Pre-feasibility study completed for Patterson Lake South in Athabasca area in Canada
Forum Energy Metals	FMC: TSX	Diamond drilling started at Fir Island project in Athabasca area
IsoEnergy Ltd.	ISO: TSX	Chemical assay work started at Larocque East project in Athabasca area and additional drilling planned in Summer 2020
NexGen Energy Ltd.	NXE: TSX	Feasibility and environmental assessment planned for Rook One project in Athabasca area
Orano S.A.	Private	Interests in several development projects, including Preston, Hook Lake and Fir Island
Purepoint Uranium Group	PTU: TSX	Continued drilling work at Hook Lake project in Athabasca area in Saskatchewan
Uranium Energy Corp.	UEC: NYSE	Reno Creek project in Texas remains in pre-construction stage; drilling at Burke Hollow in Texas postponed

Lithium

The lithium market has seemed impervious to the disruption of the coronovirus pandemic with selling prices remaining largely unchanged. However, it is anticipated that work-stoppage action by governments around the world will eventually ripple through the pace of demand and orders. Industry research firm Roskill estimates in the first quarter 2020, as much as $160 million in production value was lost by lithium mines as the result of mine shutdowns and activity scaleback. In the long term stalled economic growth could lead to less battery consumption and slower adoption of electric vehicles until governments are able to stage a recovery. Accordingly, Roskill has estimate value losses in the balance of 2020, reaching as much as $650 million in total additional lost production value.

As noted in our April 2020 report, these are transitory impacts as a consequence of a health threat and not specific to demand for lithium ion batteries. In the long-term interest is not likely impacted in electric vehicles, the largest source of lithium ion battery demand. Consumers are expected to come back through car dealerships doors by 2021 or 2022. Electric vehicles are still likely to enjoy strong adoption rates as consumers simplify and burnish lifestyles in a post pandemic world. In our view, strength of lithium demand in the long-term is more salient for Westwater share value than is the impact on immediately order flow and pace of production activity.

Graphite

Electric vehicle adoption is also the primary driver of demand for graphite. Benchmark Mineral Intelligence estimates that by 2028, 1.75 million metric tons of graphite will be need to supply sufficient anode material for lithium ion batteries. A survey of industry research suggests there are plans afoot for over one hundred lithium ion battery mega-factories around the world as automotive manufacturers gear up to meet demand for electric vehicles. Thus far there have been no announcements of cancellations for delays in these plans, suggesting that auto makers are playing a long game and so far are not letting temporary work stoppages derail capacity expansion.

Tesla’s gigafactory near Berlin, Germany shares a fate typical currently planned gigafactory capacity. Last year when Tesla announced the purchase of land at a Berlin industrial park, Tesla’s enigmatic chief executive officer promised vehicles would roll off the Berlin assembly line by mid-2021. There were some environmental hiccups in late 2019 and some staff was sent home in March 2020 due to the coronavirus threat. However, work is apparently continuing as neighbors have observed and documented the construction of access roads and other site preparation activity in the first four months of 2020. The stay-at-home and shutdown policies to stave off the virus health threat appear to have only set Tesla’s project back a few months - at least for the time being.

Vanadium

The vanadium market had pinned hopes on China's new standards to require reinforcement of rebar with vanadium. The new standard went into effect in December 2018, but mediocre compliance has left those hopes only partially fulfilled. Furthermore, crafty China manufacturers also found lower-cost niobium to be an attractive substitute for vanadium to fulfill rebar strength standards. Selling prices have pulled back from highs set in 2018.

Nonetheless, at the beginning of 2020 industry research firm Roskill predicted a shaky supply-demand balance ahead. With a relatively inelastic supply and inventories already fairly thin, any increase in demand could send vanadium prices back upward. With the decline in vanadium prices, niobium and vanadium prices are now closer to parity. For those steel producers that adopted ferroniobium to reinforce rebar it is not likely they will invest in technical changes to their production processes to switch back to vanadium. Thus vanadium may have lost some of the steel industry demand that had been expected to drive the market. Volume increases are still expected from the China steel industry production returns to more normal levels in the second half of 2020.

As noted in previous reports, near-term selling prices are not as important for Westwater as is the long-term demand trend. We note that that has been some discussion in recent months regarding the addition of vanadium to the U.S. critical minerals list. New focus on U.S. domestic vanadium sources could shine a new light on Westwater's vanadium resource in Alabama.

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	2019A Year	*2020E Year*	*2021E Year*	*2022E Year*
Total revenue	-	-	-	-	-	-	*-*	*900*	*28,500*
Gross profit	-	-	-	-	-	-	*-*	*450*	*17,100*
Operating expenses:									
Mineral property expenses	3,502	4,470	3,248	4,584	3,538	2,852	*2,978*	*5,000*	*6,500*
General and administrative	9,132	7,488	7,650	6,614	7,357	6,086	*7,479*	*8,000*	*10,500*
Accretion of asset retirement obligations	425	450	480	1,039	993	390	*406*	*500*	*1,000*
Depreciation and amortization	331	336	247	142	116	73	*73*	*80*	*160*
Impairment of mineral properties	160	960	1,673	11,436	23,712	143	*-*	*-*	*-*
Other	-	3,048	-	1,003	333	1,378	*2,169*	*1,500*	*1,500*
Total operating expenses	13,550	16,752	13,298	24,818	36,049	10.922	*13,105*	*15,080*	*19,080*
Operating income (loss)	(13,550)	(16,752)	(13,298)	(24,818)	(36,049)	(10,922)	*(13,105)*	*(14,630)*	*(1,980)*
Total other income (expense)	2,866	1,609	(6,307)	5,530	365	357	*8*	*-*	*-*
Income (loss) before income taxes	(10,684)	(15,143)	(19,605)	(19,288)	(35,684)	(10,565)	*(13,097)*	*(14,630)*	*(1,980)*
Provision for income taxes (benefit from)	-	-	-	-	-	-	*-*	*-*	*-*
Unrealized change in value, mkt. securities	-	(67)	(49)	287	(861)	-	*-*	*-*	*-*
Realized loss on sale securities	-	-	116	-	484	90	*-*	*-*	*-*
Net income (loss)	(10,684)	(15,210)	(19,538)	(19,001)	(36,061)	(10,475)	*(13,097)*	*(14,630)*	*(1,980)*
Net EPS (LPS), comprehensive	na	na	na	$ (38.50)	$ (38.50)	$ (5.39)	*$ (1.46)*	*$ (1.52)*	*$ (0.19)*
Wtd shares outstanding, diluted in 000s	na	na	na	495	928	1,961	*9,000*	*10,583*	*11,000*

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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	70%
Holds	15%
Sells	15%
Total	100%

HISTORICAL RECOMMENDATIONS AND TARGET PRICE: Westwater Resources / WWR

Report	Date	Price	Rating	Target Price	
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
Update	7/15/19	$5.01	Buy	$30.00	
Update	8/13/19	$3.30	Buy	$30.00	
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	

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.
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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