

CSPG: TV

CSPGF: OTC

1AG: FWB

# Alabama Graphite Corp.

## RECENT DEVELOPMENTS

Over the past two years, leadership of Alabama Graphite (AGC) has delivered a steady drumbeat of accomplishment. The Company plans to exploit a natural flake graphite resource in south-central Alabama and use a proprietary refinement process to deliver an ultra-high purity graphite material to the domestic U.S. market.

AGC's proprietary low-temperature process has been proven successful in producing refined graphite materials that exceed quality and performance requirements of battery manufacturers. In April 2017, the most recent results from a series of independent tests confirmed 99.9999% carbon purity in a multi-kilogram sample of the Company's primary product, *Coated Spherical Purified Graphite (CSPG)*. (More details on other test results on page 4 of this report.)

Another list is growing of established battery manufacturers and technology developers conducting qualifications tests using the Company's *CSPG* and a by-product *Purified Micronized Graphite (PMG)*. In early May 2017, Physical Sciences, an approved government contractor, declared *CSPG* a "candidate for use in Department of Defense and Department of Energy funded projects." Physical Sciences is among a dozen defense contractors, battery manufacturers and technology developers that have received materials samples from AGC. (Business pipeline list on page 4.)

In our view, the stock price does not reflect fundamental accomplishments, leaving the stock deeply undervalued. Granted inadequate capital resources presents a critical obstacle to reach the market with finished products. The Company recently raised CDN\$1.3 million (US\$981,240) that will be used to carry out the next product and business development steps. The Company has begun early production of an inventory of 120 kilograms of *CSPG* and 35 kilograms of *PMG* for shipment to prospective customers for testing and qualification trials. We believe the recent financing can support this effort but additional potentially dilutive financing may be needed for subsequent steps such as permitting. (Capitalization description on page 7 of this report.)

We believe each fresh test result and each new advance with potential customers confirms the quality, performance and marketability of the Company's *CSPG* for lithium ion batteries in particular. In our view, the stock should reflect a higher probability that AGC can surmount its business challenges to successfully bring its graphite resource to market as a high-value added spherical graphite material. (See valuation exercise on page 9.)

## MARKET DATA

Price: \$0.10 (5/26/17)  
 52 Wk Hi-Lo: \$0.17 - \$0.09  
 Ave. Volume: 500K  
 Short Interest: <1%  
 Beta: NA

*All Market Data in USD\$*

## VALUATION

Price/Sales: na  
 Price/CFO: neg  
 Price/EPS: neg  
 Price/Book Value: 2.5 X

*Based on TTM ending 2/28/17*

Consensus EPS FY2017: NA  
 Forward PE: NA  
 Consensus EPS FY2018: NA  
 Forward PE: NA

## EQUITY SECURITIES

Common Shares Out: 145.3 M  
 Insiders: 4.5%  
 Float: 138.7 M  
 Institutional: 1.0%  
 5% Holders: na

Warrants and  
 Options Outstanding: 44.2 M

*As of 5/26/17*

*Source: Company Reports and  
 Crystal Equity Research estimates*

## INVESTMENT HIGHLIGHTS

### Positives

- ◆ Large market opportunity for high-purity graphite in lithium-ion batteries and other advanced technology applications in military and aerospace industries
- ◆ First potential domestic U.S. graphite producer; exclusive ownership of previously proven natural flake graphite resource in Alabama
- ◆ Favorable location of graphite resource in terms of water, energy and transportation infrastructure as well as qualified labor for mining and processing activities
- ◆ Experienced management team with successful track record in mineral resource development and industrial materials production
- ◆ Positive preliminary economic assessment of primary mining and secondary processing of high-purity graphite material based on low capital requirements and economical operating structure
- ◆ Consistently positive tests of graphite material product confirming 99.9999% ultra high-purity required for battery-grade applications

### Negatives

- ◆ Strong competition to supply high-purity graphite for advanced applications with numerous new declarations for new graphite mines
- ◆ Developmental stage company with no historic operations or revenue and expectations for continued net losses in near-term
- ◆ Limited financial resources and significant capital requirements to establish mining and processing operations
- ◆ Additional potentially dilutive issuance of equity or use of leverage may be needed to finance strategic growth plan
- ◆ Unseasoned security with modest trading volume and wide bid-ask spreads that could lead to price volatility as well as loss of capital

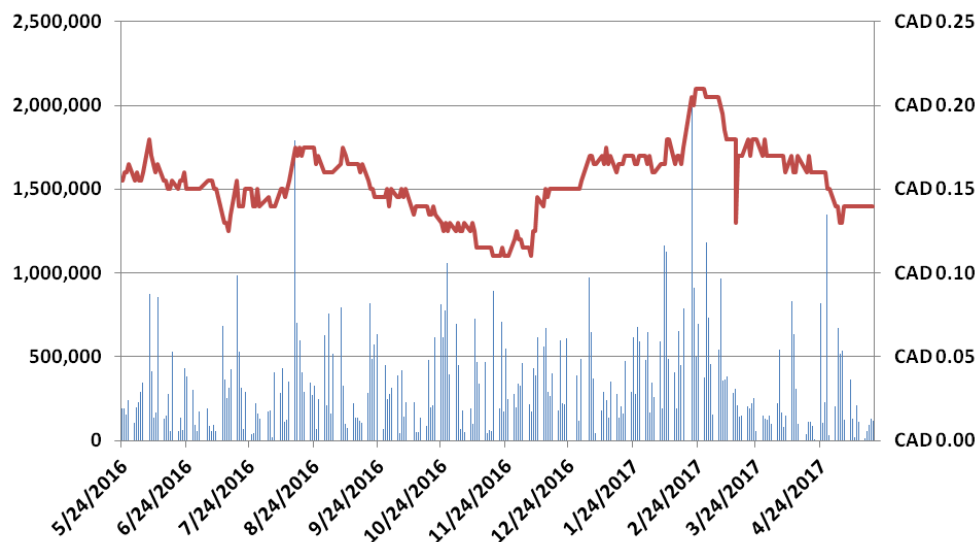
## OUTLOOK

In our view the outlook for shares of Alabama Graphite is positive. The Company's product and business development activities have accelerated. We expect to see a continuing stream of announcements from the Company related to quality and performance testing at AGC's own laboratory as well as from third parties. Results are expected in the near-term from qualification trials by prospective customers that received *CSPG* and *PMG* samples earlier in 2017. Each successive news release could elevate investor confidence that AGC's management team is executing on the plan to enter the U.S. domestic market with an ultra-high purity graphite material suitable for use lithium ion batteries.

In our view, the stock is undervalued and is an interesting target for risk tolerant investors.

Our simple, but compelling valuation exercise as described on page 9 of this report is based on the "low case" presented in the 2015 Preliminary Economic Assessment (PEA). Even against the most conservative view of the Company's value as presented in the PEA, the current share price appears to be well below fair valuation. We argue the stock could be valued at least five times higher or at least CDN\$0.75 or USD\$0.50 per share.

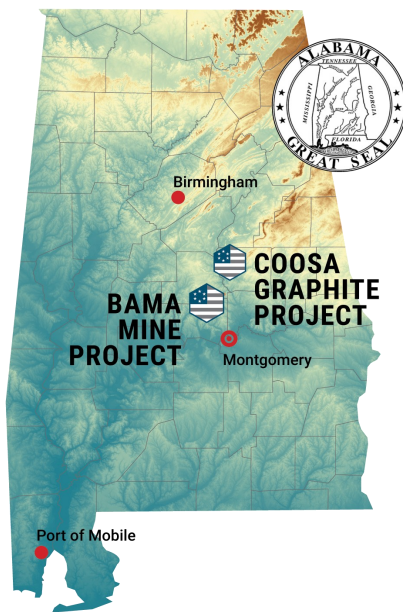
## STOCK CHART



Source: Toronto Venture Exchange in Canadian Dollars

## FOUNDATION

- Previously exploited high-quality flake graphite asset
- Extraction through low-cost surface mining method
- Proprietary, low-cost graphite purification process
- Low-cost standard mining and process equipment requirements
- Supportive community with well-qualified labor pool
- Availability of water, natural gas and electrical inputs required for processing steps
- Access to market through well maintained roads, ports



## RESOURCE ASSETS

- **Coosa Property** - Coosa County, Alabama - 41,535 acres under renewable 5-year lease
- **Chestnut Creek Property** - Chilton County, Alabama - 1,160 acres under 5-year renewable lease
- **Bama Property** - Chilton County, Alabama - 200 acres under 5-year renewable lease

## STRATEGIC PLAN

Alabama Graphite (AGC) plans to produce ultra-high purity graphite material for sale to battery manufacturers in the U.S. and worldwide. The Company has perfected a low-temperature process that is capable of producing graphite material with 99.9999% carbon purity.

Two natural flake graphite resources in central Alabama have been secured through long-term leases to provide a ready graphite source. The Company plans to first exploit its Coosa graphite resource with indicated contained graphite near 1.9 million tons as cited in a preliminary economic assessment completed in November 2015. The graphite is accessible using standard surface mining equipment and methods. The Coosa Graphite Mine operated in the area up through 1948.

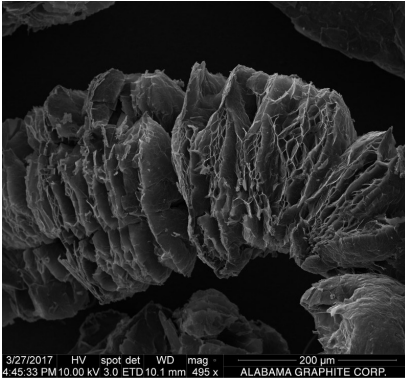
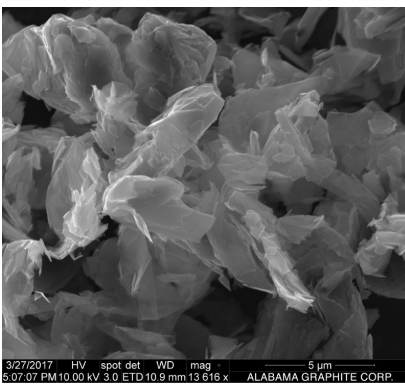
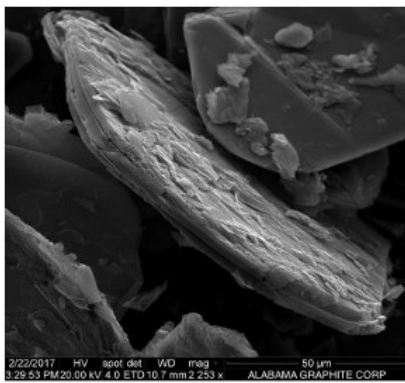
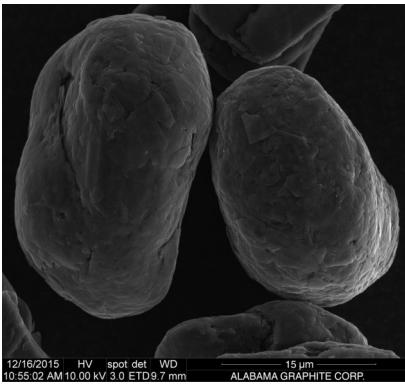
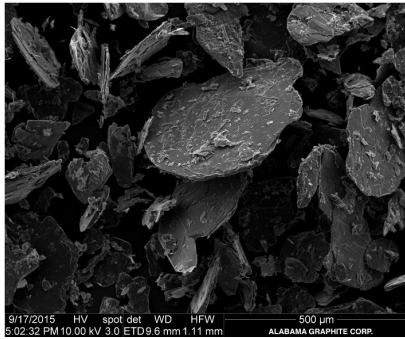
The Company's business model will encompass the usual crushing, grinding and flotation steps used to separate graphite flake concentrate from waste rock. Most resource developers take their graphite material to market in this raw state, accepting a lower commodity price from intermediaries rather than incur the expense of further processing.

However, AGC intends to refine its concentrate into finished graphite materials ready for incorporation in final products, thereby capturing additional value from its graphite resource. A processing plant is planned near Rockford, Alabama. The facility will house equipment for all steps in the refinement process: purification, micronization, spheroidization and coating. Initial planned capacity is 5,500 tons per year with expansion to 16,500 tons per year in the medium term. Approximately 70% of production will be coated spherical purified graphite and 30% purified micronized graphite.

AGC is establishing a line of branded graphite products and plans to established a sales function to sell directly to end-users. Senior officers have begun business development work, focusing first on the U.S. battery and defense industries. Practical knowledge has already been gained in the sampling process of several prospective customers includes major United States defense contractors and leading lithium ion battery manufacturers. (See list on page 4 of this report.)

## REGIONAL ECONOMY

The state of Alabama, where the Company plans operations, has a struggling economy, ranking near the bottom of the fifty states in terms of state domestic product. Nonetheless, the state ranks among the top five producers of cars and light trucks in the U.S. DuPont, 3M Company, BASF and Daikin are among the chemical companies that have operations in the state. Additionally, the leading aerospace companies Boeing, Lockheed Martin and Raytheon have footholds in Alabama. Importantly, in 2014 the Sylacauga Marble Quarry resumed operation just to the north of the Coosa project area. The presence of these strong players bodes well for a well-trained labor force with the kind of skill sets AGC will need for mining and mineral processing.



## PRODUCT DEVELOPMENT

Alabama Graphite has made considerable progress since metallurgical tests completed 2014 and 2015 proved its Bama and Coosa resources yielded high-purity natural flake graphite. Just two years ago in June 2015, the Company announced initial development work on its *Coated Spherical Purified Graphite* or *CSPG*. Since then a series of tests completed by the Company as well as independent laboratories have proven AGC's proprietary refinement process is capable of producing ultra-high purity material using graphite from its Coosa resource.

In April 2017, the most recent independent test results confirmed 99.9999% carbon purity in a multi-kilogram sample of *CSPG*. This is sufficient purity to qualify for both battery and nuclear applications. Additionally, standard tests for lithium ion batteries by research partner, Oak Ridge National Laboratory, found 'cycling efficiencies' at 95.21% and 97.40% for two grades of *CSPG*, well within minimum expectations by battery manufacturers. These same tests found high 'electrode loading' of 13 milligrams that exceeded the range of 10 to 12 milligrams of typical natural spherical graphite. ACG has also begun to receive positive test results from prospective customers. In early May 2017, Physical Sciences, an approved contractor, declared *CSPG* a "candidate for use in Department of Defense and Department of Energy funded projects."

## TARGET MARKETS

- Battery components
- Fuel cell components
- Defense technology
- Aerospace electronics
- Nuclear reactor components

## PLANNED PRODUCT LIST

### Coated Spherical Purified Graphite

Purity: 99.9999% wt% C

### Conductivity Enhanced Graphite

- Purified Micronized Graphite (PMG)
- Expanded Graphite (EXDG)
- Delaminated Expanded Graphite (DEXDG)

## CUSTOMER TESTING AND QUALIFICATION

- June 2016 - **Lithium Ion Battery Manufacturer** - two specifications of *CSPG* for military use in engine starter batteries and soldier portable power
- July 2016 - **Six Department of Defense Contractors** - general due diligence on Company's *CSPG* for use in lithium ion batteries
- August 2016 - **Battery Manufacturer** - samples of the Company's *CSPG* and *PMG* for use in military applications, including lithium ion batteries
- September 2016 - **Lithium Ion Battery Manufacturer** - sampling of both *CSPG* and *PMG* for Department of Defense applications in rechargeable batteries and microgrid energy storage
- September 2016 - **Total, SA** - sampling of *CSPG* for energy storage uses
- January 2017 - **Two Department of Defense Contractors** - samples for two specifications each of *CSPG* and *PMG* for power sources in advanced weapons systems and other projects
- May 2017 - **Physical Sciences, Inc.** - positive results from qualification test results from previously announced sample shipments

**GRAPHITE PROPERTIES**

- Soft and slippery
- Nontoxic with metallic luster
- Heat resistant, slows neutrons
- Good conductor of electricity
- Resistant to chemicals
- High melting point

**GROWTH DRIVERS**

- Electric vehicle adoption using lithium ion batteries with high graphite content
- Expanding use of graphite in fuel cells
- Adoption of nuclear reactor design with high-purity graphite in 'pebble-bed'
- New applications for graphite in defense technology using advanced metal alloys
- Intensifying applications in wind energy technology
- Increasing use of graphite in electronic devices

**LITHIUM ION BATTERY TECHNOLOGY**

For all the complexity in their chemistry, lithium ion batteries are simple in design. There are only three main components: a positive electrode called a cathode, a negative electrode called an anode, and electrolyte. The electrolyte is a lithium salt in an organic solvent. The electrolyte serves as a 'highway' for migration of ions and their associated electrons from anode to cathode. The cathode is usually made from lithium metal oxide material or vanadium, while the anode is most frequently made from graphite, but silicon and lithium are options. Carbonaceous anodes from graphite are the most utilized due to low cost and ease of supply.

Lithium ion battery manufacturers prefer particle size is in a range of 10 microns to 25 microns with at least 99.9999% carbon purity. They have accepted purified synthetic graphite, which is produced in a series of steps involving high-temperature ovens and strong chemicals such as hydrochloric acid. About 70% of battery anode material is made from synthetic graphite and the balance from natural graphite.

A spherical shape with low surface area is preferred by battery producers. Reduced surface area on the graphite particles helps promote low temperatures as the battery is used and helps prevent a malfunction called thermal runaway. Low surface area also helps avoid irreversible capacity loss. Such losses reduce battery efficiency due to a portion of lithium and electrolyte that get irreversibly bound up after the initial battery charge. Irreversible capacity loss of 6% or less is preferred and is sometimes expressed as a corollary called cycling efficiency. Battery manufacturers look for a minimum cycling efficiency of 94%.

**SPHERICAL GRAPHITE SUPPLY AND DEMAND**

Graphite is an important material for lithium ion batteries. According to Oak Ridge National Laboratory, a high energy, 100 AH battery for an electric vehicle could require as much as 563.6 grams of graphite or graphite alloy for the anode, representing about 16% of the total battery content.

There is currently capacity to produce lithium ion batteries totaling about 35 gigawatt hours per year. Several large-scale facilities are coming online in the next few years, including Tesla's Gigafactory in Nevada, LG Chem in Nanjing, China and FoxConn in Anhui, China. By 2020, Benchmark Mineral Intelligence estimates total capacity could reach 122 gigawatt hours per year, with a majority in China.

Benchmark forecasts that demand for spherical graphite for the battery anode market could increase from 80,000 tons per year in 2015 to 250,000 tons per year by the end of 2020. To maintain the current mix of synthetic and natural graphite sources, at least 360,000 tons of natural flake graphite will be needed as feedstock to produce the even the conservative estimated spherical demand.

China currently supplies as much as 95% of uncoated spherical graphite to the world. Much of the China production is sent to Japan refiners for the coating step. The anticipated expansion in demand for spherical graphite has China producers making plans to integrate downstream to sidestep their Japan customers. Such moves would bring a majority of the entire battery supply chain into China.

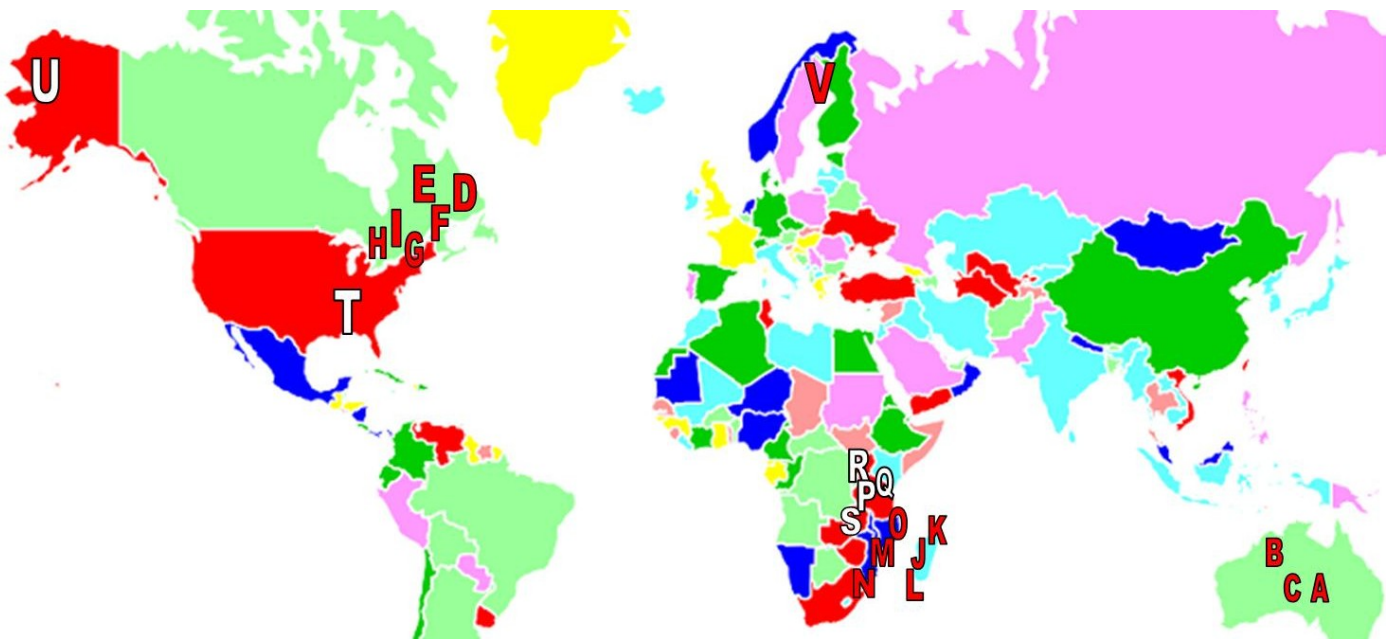
The prospect of even tighter control over the supply chain is encouraging battery manufacturers in the rest of the world looking for alternative sources for spherical graphite. The U.S. Department of Defense placed graphite on its critical materials list and encourages defense suppliers to find domestic sources.

## COMPETITIVE CONDITIONS

We expect the lines between graphite resource developer and materials producer to become increasingly blurred. Alabama Graphite is not the only industry player to attempt forward integration into finished graphite products. In the first quarter 2017, graphite mining giant Imerys Graphite & Carbon acquired Nippon Power Graphite, a producer of battery anode material. Nippon buys spheronized graphite material from suppliers in China and applies the final coating before selling to the lithium ion battery market. The move makes it clear that Imerys intends to capture a larger portion of the market.

In our view, the integrated production model chosen by Alabama Graphite could be the key to success in the modern graphite industry. This business model affords expanded profit margins as refined graphite materials command higher selling prices relative to the incremental cost of additional processing. That said, knowledge and experience in processing techniques will be critical to success. In this respect, ACG has a clear advantage with a deep bench of experienced engineers. The Company is also building a solid record of successful testing of its materials proving it exceeds minimum requirements for battery- and nuclear-grade graphite material. Positive results have come from Company's tests, independent third-party tests as well as sampling and qualification trials from prospective customers.

We expect other developers to emulate ACG's success. In our view, the Company's lengthy advance start affords strong competitive advantage against new comers. Its unique position as a domestic producer in the U.S. also provides advantage in the U.S. defense industry against established suppliers.



## NEW NATURAL GRAPHITE DEVELOPMENT

### Australia

A Archer Exploration  
C Lincoln Minerals

### Madagascar

J Energizer Resources  
L DNI Metals

### Tanzania and Malawi

P IMX  
R Magnis

### Europe

V Talga Resources - Sweden

B Hexagon Resources

K National Graphite

Q Kibaran Resources

S Sovereign Graphite

### Canada

D Focus Graphite  
F Mason Graphite  
H Ontario Graphite

### Mozambique

M Damodar Ferro Lda.  
O Syrah Resources

### United States

T Alabama Graphite Corp.

E Lomiko Metals

G Northern Graphite

I Zenyatta Ventures

N Graphit Kropfmühl

U Graphite One

Sources: Industrial Minerals, Crystal Equity Research

**BALANCES**

<b>Canadian Dollars</b>	<b><u>8/31/16</u></b>	<b><u>2/28/17</u></b>
Cash	\$ 0.096	\$0.435
Current assets	\$ 0.315	\$0.657
Exploration assets	\$ 6.866	\$7.134
Equipment	\$ 0.002	\$0.002
Total assets	\$ 7.184	\$7.793
Accts. Payable	\$ 0.521	\$0.209
Current Liabilities	\$ 0.521	\$0.209
Notes Payable	\$ -0-	\$ -0-
Deficit	(\$10.174)	(\$12.062)
Total Equity	\$ 6.663	\$ 7.584
Shares Outstanding	116.6	136.5
Warrants/Options	24.1	35.4

*Dollars, shares and derivatives in millions*

*Source: Company Reports and Crystal Equity Research Estimates*

**CASH USAGE AND BALANCES**

As a developmental stage company Alabama Graphite has not yet reported revenue. Accordingly, the Company continues to report net losses. Operating expenses increased to CDN\$1.9 million (US\$1.4 million) in the six months ending February 2017, compared to CDN\$790,000 (US\$581,000) in the same period a year earlier. This represents a significant increase from the same period a year ago as management has accelerated product and business development efforts. Samples of the Company's planned products have been produced for independent testing and customer sampling. Consequently, the Company is a net user of cash to support activities. A total of CDN\$1.7 million (US\$1.3 million) in cash flow was used to support operations in the first six months of the fiscal year that will end in August 2017. We estimate the Company is now using cash to support operations at approximately CDN\$320,000 (US\$209,000) per month.

At end of February 2017, cash resources totaled CDN\$435,000. Since the close of the quarter an additional CDN\$1.3 million (US\$981,240) in new capital was raised through the sale of common stock. We estimate the Company has sufficient capital to support operations through the 2017 fiscal year end.

**OPERATING COMPARISONS****Canadian Dollars****As Reported**

	<b><u>FY1H16</u></b>	<b><u>FY1H17</u></b>
Sales	\$ -0-	\$ -0-
Oper. Loss	(\$0.790)	(\$1.901)
Net Loss	(\$0.749)	(\$1.888)
CFO	(\$0.595)	(\$1.704)
EPS	(\$0.01)	(\$0.01)

**As Adjusted for Non-cash Charges\***

	<b><u>FY1H16</u></b>	<b><u>FY1H17</u></b>
Sales	\$ -0-	\$ -0-
Oper. Loss	(\$0.757)	(\$1.341)
Net Loss	(\$0.716)	(\$1.328)
CFO	(\$0.595)	(\$1.704)
EPS	(\$0.01)	(\$0.01)

*Dollars in millions; Fiscal year end 8/31*

*\*Crystal Equity Research Estimates*

**CAPITAL RESOURCES**

In early May 2017, the Company completed a private placement of common stock at a price of CDN\$0.15 per share (US\$0.11). A total of 8.8 million shares of stock were issued along with another 8.8 million warrants to purchase common stock at an exercise price of CDN\$0.20 per share (US\$0.15). The warrants expire in three years. We estimate the transaction increased total shares outstanding to 145.3 million and total warrants outstanding to 32.7 million. Exercise of all warrants could raise an estimated CDN\$4.8 million (US\$3.6 million) and would represent potential dilution of 20.5%.

The private placement raised a total of CDN\$1.3 million (US\$981,240) that is designated for general corporate purposes. We expect management to use some of the new capital to support the next leg of the product and business development plan. The Company has begun early production of at least two of its products for shipment of sample quantities to prospective customers for testing and qualification trials. The inventory of 120 kilograms of CSPG and 35 kilograms of PMG could be produced at the Company's first pilot plant. We also expect ACG to move forward as possible with next steps in obtaining permits for Coosa Mine. Additionally, the Company is planning second pilot plant located in Alabama.

**BALANCES**

<b>US Dollars</b>	<b>8/31/16</b>	<b>2/28/17</b>
Cash	\$0.071	\$0.320
Current assets	0.233	0.483
Exploration assets	5.080	5.245
Equipment	0.002	0.002
Total assets	\$5.316	\$5.730
Accts. Payable	\$0.386	\$0.154
Current Liabilities	0.386	0.154
Notes Payable	-0-	-0-
Deficit	( 7.529)	( 8.869)
Total Equity	\$4.931	\$5.577
Shares Outstanding	116.6	136.5
Warrants/Options	24.1	35.4

Dollars, shares and derivatives in millions

Source: Company Reports and Crystal Equity Research Estimates

**EARNINGS COMPARISONS****US Dollars****As Reported**

	<b>FY1H16</b>	<b>FY1H17</b>
Sales	\$ -0-	\$ -0-
Oper. Loss	(\$0.581)	(\$1.398)
Net Loss	(\$0.550)	(\$1.388)
CFO	(\$0.438)	(\$1.253)
EPS	(\$0.01)	(\$0.01)

**As Adjusted for Non-cash Charges\***

	<b>FY1H16</b>	<b>FY1H17</b>
Sales	\$ -0-	\$ -0-
Oper. Loss	(\$0.557)	(\$0.986)
Net Loss	(\$0.527)	(\$0.976)
CFO	(\$0.438)	(\$1.253)
EPS	(\$0.01)	(\$0.01)

Dollars in millions; Fiscal year end 8/31

\*Crystal Equity Research Estimates

**ECONOMICS OF INTEGRATED BUSINESS MODEL**

Investors may need to do a bit more work to value shares of Alabama Graphite. The Company does not fit the mold of the typical resources developer confined to upstream activities such as exploring, extracting and concentrating ores. Valuation is based on the prevailing concentrate pricing dynamic and the amount of mineral reserve that can be reasonably extracted, which are juxtaposed against capital requirements and operating costs. The keys to success are finding a high quality resource and pulling it out of the ground at low cost.

Alabama Graphite (AGC) is presented with other challenges altogether. Its business model is based on production of a refined graphite material ready for use in batteries and other products that require ultra-high purity graphite. The keys to success for ACG are in perfection of a proprietary refinement process that reliably delivers a graphite material with consistent performance characteristics. Management will also need to craft an effective business development effort to reach downstream end-users.

AGC's business model requires a more nuanced valuation approach that moves beyond the economics of graphite reserves and flake size. Important factors in valuing Alabama Graphite are its first mover status as a U.S. domestic supplier, higher-margin finished products, and the benefits of integration.

There are merits of having control over the entire supply chain from graphite resource through all steps to product battery-grade graphite material. A captive graphite ore source provides AGC with a feedstock of known characteristics, thereby reducing the risk of anomalies in the purification process and the final product. Involvement in all the refinement steps, makes it possible for the ACG's engineers to deliver with a product that meets customer specifications.

The business model should make it possible for AGC to capture more value in the supply chain and deliver higher profits to shareholders. AGC's value will largely be based on production capacity and selling prices for coated spherical graphite and purified micronized graphite.

**Alabama Graphite  
and Japan Refiners**

**Coated Spherical Graphite**  
\$7,000 to \$12,000

**China  
Producers**

**Uncoated Spherical Graphite**  
\$3,000 to \$3,500

**Most Resource  
Developers**

**Flake Graphite Concentrate Feedstock**  
\$700 to \$850

Prices in US dollars per metric ton



**MATERIALS INDUSTRY PEERS**

- **AMG Advanced Metallurgical Group, NV** (ADG.SG)
- **Focus Graphite** (FMS.T)
- **Graphite India Ltd.** (GRAPHITE.BO)
- **Graphite One** (GPH.T)
- **Great Lakes Graphite** (GLK.T)
- **Imerys Carbon** (NK.PA)
- **Lomiko Metals** (LMR.T)
- **Mason Graphite** (LLC.T)
- **Northern Graphite** (NGC.T)
- **Nouveau Monde** (NOU.V)
- **SGL Carbon SE** (SGL.GR)
- **Syrah Resources** (SYR.AX)
- **Tokai Carbon Co.** (064760.KQ)
- **Toyo Tanso Co.** (5310.TYO)

**SUMMARY ECONOMICS**

- **Contained Graphite** - 1.9 million tons (78.5 million tons indicated and 2.4% carbon)
- **Selling Prices per Ton**  
CPSG \$6,350 to \$10,890  
PMG \$1,630 to \$2,540
- **Production**  
Years 1 to 6: 5,500 tons  
Years 7 to 27: 16,500 tons
- **Royalty** - 2.5%
- **Production Cost** - \$1,410 per ton
- **Capital Investment**  
Initial - \$42.3 million  
Year 6 - \$83.2 million  
Annual Maintenance - 3%
- **Tax Rate** - 35%
- **Present Value** at 10% capital cost  
Low case - \$257 million  
Base case - \$329 million  
High case - \$400 million

Source: 2015, Preliminary Economic Assessment

**VALUATION METRICS**

Overcapacity continues to dominate sentiment relative to the global graphite market as supply growth exceeds demand trends. There appears to be a consensus among industry analysts that the global graphite market will experience significant growth over the next several years. Typical of industry forecasts is the prediction by A2a Market Research of 10.52% compounded annual growth between 2016 and 2023. New uses of graphite in lithium ion batteries, power generation and electronics are frequently cited as forces driving growth.

Nonetheless, investors appear paralyzed by the prospect of significant new mining capacity coming into the market. As shown in on page 6 of this report, there are at least two dozen natural flake graphite development projects underway, including the Coosa Mine Project that Alabama Graphite intends to use as feedstock for its *CSPG* product. New supply is expected to further erode pricing from the current range of US\$700 to US\$850 per metric ton. (See selling prices on page 8 of this report.)

Since natural flake graphite is the foundational feedstock for all refined graphite materials, investors have painted all members of the broader graphite industry with the same brush. This may be short sighted. Since the demand drivers cited above are for refined and purified graphite materials such as the Company's *CSPG*, we expect less downward price pressure in that category.

Among AGC's peers in the natural graphite sector, Imerys Carbon represents a possible comparable. With recent acquisitions Imerys has become a fully integrated graphite supplier with interests in mining and processing, a profile very similar to AGC's aspired business model. Imerys currently trades at 1.49 times sales and 13.4 times forward earnings, two metrics that could be used as a starting point in valuing AGC. Unfortunately application of sales or earnings metrics is not possible for a developmental stage company like AGC.

An alternative is to view the share price in terms of successful execution of AGC's strategic plan. We estimate the probability of success implied in AGC's current share price is less than 10% against the 'Low Case' presented in the Preliminary Economic Assessment completed in 2015 for the Coosa Project.

In our view, the probability of AGC's success is rising with each successive quality and performance test of its *CSPG* and *PMG* products. Even more important are qualifications by prospective customers. The first such results were received in early May 2017 from a government approved consultant. We believe this propels the probability of success to greater than 50/50. This implies a value for AGC at least five times the current share price or at least CDN\$0.75 or USD\$0.50 per share.

## LEADERSHIP

There is wide diversity in the skills and knowhow of the leadership and employees at Alabama Graphite. Importantly, the CEO and members of the board have led successful projects to commercialize graphite resources and graphite materials. Their ability to execute the Company's strategic plans is a critical element in successfully bringing its battery grade graphite materials to market.

**Don Baxter** has been **President** and **Chief Executive Officer** since December 2015. Baxter brings extensive experience in the graphite industry to the Company and previously held senior positions at Focus Graphite and Northern Graphite. He earned a degree in mine engineering from Queen's University.

**Douglas Bolton** has been **Chief Financial Officer** since October 2015. He has extensive experience in audit, tax, accounting and financial reporting functions. He holds both CPA and CA designations.

**Tyler Dinwoodie** was named Executive Vice President for corporate development in September 2016. He was previously in senior positions with Focus Graphite and Intercontinental Potash. His educational background is in economics and physics.

**Chairman of the Board** is **Jean Depatie**, who was first appointed as a **Director** in November 2012, is recognized internationally as a leader in the graphite industry. He was instrumental in launching production at the Imerys' Timcal graphite mine.

**Daniel Goffaux** has served as **Director** since May 2014. He is also a veteran of the graphite mining industry with experience at Timcal graphite mine, Thierry copper mine and others.

**Gareth Hatch** was appointed **Director** in August 2016. He holds several advanced degrees in engineering, metallurgy and materials and is widely recognized as an authority these fields.

In March 2016, **Jesse Edmondson** was appointed **Site Geologist** and **Director of Community Relations**. He has lengthy experience in the Alabama and is familiar with the geographic and economic systems in which the Company operates.

**Randy Moore** was appointed **Strategic Advisor** in January 2017. Moore is the CEO of ZAF Energy Systems, a developer of advanced battery technologies. He was previously president of Eagle Picher Technologies, which specializes in high-reliability batteries for aerospace.

## RELATIONSHIPS

- **KLM Geoscience** - geophysical survey and engineering services
- **ActLabs** - mineral assay services
- **SGS Labs** - engineering services, including pilot plant design, construction and operation in Lakefield, Ontario
- **AGP Mining Consultants, Inc. and Metal Mining Consultants** - preliminary economic assessment of graphite resources



## CAPITALIZATION

Recent Price:	\$0.10
Shares Out:	145.3 M
Market Capital:	\$15.1 M
+ Preferred Stock	-0- M
+ Debt	-0- M
- Cash	<u>0.9 M</u>
Enterprise Val:	\$16.0 M
Book Value:	\$ 6.6 M
Working Capital:	\$ 1.3 M

*Pro forma balances as of 2/28/17  
Reflects May 2017 private placement  
of 8.8 million common stock shares*

*All figures in US Dollars*

## OWNERSHIP

	Common Stock (in Millions)
<b>Insiders:</b>	
Baxter, CEO	2.9
Bolton, CFO	0.1
Dinwoodie, EVP	1.5
Edmondson, SG	0.2
Pamplin, VP	1.1
Depatie, Chairman	0.6
Goffaux, Director	0.1
Hatch, Director	<u>0.1</u>
Total Insiders*	6.6 M
As % of Shares Outstanding	4.5%

*\*Insiders hold warrants and options  
for an additional 11.2 million shares*

*\*Reflects insider participation in May  
2017 private placement of common  
stock and warrants*

*Source: Company Reports and  
Crystal Equity Research Estimates*



New York, New York

[www.crystalequityresearch.com](http://www.crystalequityresearch.com)

Phone: 212-400-7519

E-mail: [info@crystalequityresearch.com](mailto:info@crystalequityresearch.com)

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