Struthers Report V22 # 3.1 Website, Graphene, Elcora ERA February, 16 2016



Know when to hold-em!
Know when to fold-em!
Know where to set stops!
Know when to run!
Never count your portfolio
Until the sells are done..

rhstruthers@gmail.com

Website -

I thought I would give an update here and encourage you to sign up. I think you will find it very useful

Members

You need a logon and password to access the 'Members Section', anything under the Member menu. All the newsletters are listed there in order, the Selection Lists, Millennium Index. I also have watch lists that contain all the newsletter picks and other stocks I am watching. **Just email a logon and password**

These lists are for you too so let me know any stock you want added. You will find it convenient that you can just click on the symbols in a list to get interactive charts.

The Elevator room also lists some short term trades. There is also 3rd party analysts supplying trading ideas there, I normally have their last 15 ideas listed.

The TMTA report is another new analyst contributing to the site, the 1st report is up there now

Interest Blog

It is just that, some of my hobbies and interests, Sunset pics, music, funny videos. I plan on sections for famous leaders etc. There is section on investing, options, precious metals, bonds.

You might find visiting the 'Coins' section under hobbies useful, there is a coin news feed and often there is articles on Gold and precious metals there.

The purpose of this whole section is to give the site stickiness, something to explore. It also attracts traffic to the site as some of the things there are popular among searches.

Market Trends

This is a new section where I will list the major theme I see in direction for various markets. Will probably add more here in time. There is also a list of stock market holidays for North America, Japan, China etc. If you are not sure if markets are open in around particular holidays it lists them here

\$\$Lounge

This is a chat room or forum and there is numerous topics up there now. Economy, Gold, Graphite, some of our stocks and more

To try and get some more participation, I opened all of it up to the public, but they have to register as a Guest on the site to put up comments. At a future date we can always have private topics for members only.

I encourage you to participate, I try to go there once a day and there are several members now posting info and links on our various stocks and markets. A lot of the chat rooms out there are pretty cluttered and lack good info so I am hoping to improve on this.

You can create your own topics as well, just go under one of the Categories.

Just be sure to login first and you have full access to the \$\$Lounge. It takes a little getting use to but after a while you should have no trouble navigating around.

Feel free to pass on to friends and fellow investors to sign up as Guests. You just go to the login button and click "Don't have an account" you pick your own user name and password and get an email confirmation. This login will not give access to Members section though.

Struthers Report

This section I list some samples of the newsletter. There is a section to learn about Technical charting, you may also find this good for reference on technical indicators

There is a section to learn about Graphite as well.

The Heelo section is for Members only but I will soon open this to public as shortly they are starting their next raise or placement at 35 cents per share

Best Stocks to Buy, is basically a list of popular stocks with an interactive chart for them. I basically put it up as a resource for investors as these stocks are looked at a lot. The heading does not mean they are the best, but is simply a way to attract investors and search engines.

I am just now starting to optimize the site for the search engines, will take some time and ongoing process.

Home Page

I have 3 news feeds in here from CNN, Reuters and 1 Canadian CTV so lots of head line news. I also have the market ticker across the top and one on the side so you can quickly get market quotes, Gold and Oil etc. I debating about the ticker, it looks and works great but slows down loading of the site

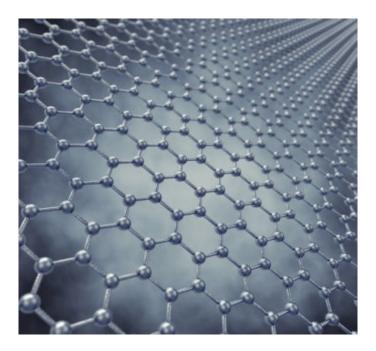
I list the links to my Seeking Alpha articles as well

Any suggestions for improvements are always welcome

Graphene

Graphene has the potential to change the future more than we could ever imagine. I have said before it is probably the most significant discovery since the Silicon chip and computers.

It is hard to keep pace with the advancements of graphene but I am going to talk about a few to give you some insight.



This is an illustration of how graphene might look if we could see it, just one atom thick

https://www.sciencedaily.com/releases/2015/11/151116120615.htm

Dr Constant and his colleagues used pulses of light to be able to trap the light on the surface of commercially-available graphene. When trapped, the light converts into a quasi-particle called a 'surface plasmon', a mixture of both light and the graphene's electrons.

Additionally, the team have demonstrated the first example of being able to steer the plasmons around the surface of the graphene, without the need to manufacture complicated nanoscale systems. The ability both to trap light at a surface, and direct it easily, opens up new opportunities for a number of electronic-based devices, as well as help to bridge the gap between the electronics and light.

Dr Constant said: "Computers than can use light as part of their infrastructure have the potential to show significant improvement. Any advance that reveals more about light's interaction with graphene-based electronics will surely benefit the computers or smart phones of the future."

https://www.sciencedaily.com/releases/2012/04/120409103954.htm

A North Carolina State University researcher has developed a more efficient, less expensive way of cooling electronic devices -- particularly devices that generate a lot of heat, such as lasers and power devices. The technique uses a "heat spreader" made of a copper-graphene composite, which is attached to the electronic device using an indium-graphene interface film

"Both the copper-graphene and indium-graphene have higher thermal conductivity, allowing the device to cool efficiently," says Dr. Jag Kasichainula, an associate professor of materials science and engineering at NC State and author of a paper on the research.

Researchers from the University of Exeter have discovered an innovative new method to produce the wonder material Graphene significantly cheaper, and easier, than previously possible. It grows graphene in an industrial cold wall CVD system, a state-of-the-art piece of equipment recently developed by UK graphene company Moorfield.

This so-called nanoCVD system is based on a concept already used for other manufacturing purposes in the semiconductor industry. This shows to the semiconductor industry for the very first time a way to potentially mass produce graphene with present facilities rather than requiring them to build new manufacturing plants. This new technique grows graphene 100 times faster than conventional methods, reduces costs by 99 % and has enhanced electronic quality.

Science Daily is probably one of the best sources on graphene news development.

I worked 30 years at IBM with computers and I cannot even grasp the enormous potential of this stuff. You have probably seen those Scify movies where something comes from outer space made of some unbelievable advanced material – well graphene would qualify!

And the strength is just unbelievable, many multiples than anything out there today. If you could build a car using fair amounts of graphene, it would be fractions of the weight and multiples of the strength compared to today.

And why not, at first we thought plastic could never be used in automobiles, now it is everywhere.

- Professor Seigo Tarucha from the University of Tokyo, coordinator of the Global Center of Excellence for Physics at Tokyo university and director of the Quantum Functional System Research Group at Riken Center for Emergent Matter Science said: "The ability to manufacture high quality, large area graphene (at a low cost) is essential for advancing this exciting material from pure science and proof-of-concept into the realm of conventional and quantum electronic applications."
- Electrons in graphene take a special electronic state called Dirac-cone where they behave as if
 they have no mass. This allows them to flow at very high speed, giving graphene a very high
 level of electrical conductivity. This is significant because electrons with no mass flowing with
 no resistance in graphene could lead to the realization of an ultimately high-speed nano
 electronic device.
- Graphene leans on glass to advance electronics. Scientists' use of common glass to optimize graphene's electronic properties could improve technologies from flat screens to solar cells

Graphene is going to change the world and Elcora Advanced Materials will be a huge part of this.

I believe Elcora could be to graphene, what Intel was to Silicon

Elcora Advanced Materials TSXV:ERA OTC:ECORF Recent Price \$0.46 Entry Price \$0.13 Opinion – strong buy

They did the name change earlier in February and better reflects who they are, which is not a junior resource company.

Yes the company has a graphite mine in Sri Lanka with small production but that is what separates it from the crowd of junior graphite companies. Many of them will talk about the potential of their graphite for graphene but without production it is just talk. Elcora only has small production, but the Graphene market is currently small so that is all that is required at this point.

And important is Elcora controls this graphite production to suit refining to Graphene.

This was from their January 11th news release

The Elcora system uses vertical integration in mining, processing and refining to optimize the graphite for the process. The company has developed a new industrial process, which is a trade secret that is capable of transforming Elcora graphite into high-quality graphene.

Troy Grant. "The beauty of the system is that it can work with a wide variety of graphite sources, so we are not limited by the graphite supply. Once completed, we will be able to supply the market with consistent high-quality graphene that is made from natural graphite. We believe this will be a huge contribution to the graphene industry."

Elcora's graphene was independently tested at the Centre for Advanced 2-D Materials (previously known as **Graphene Research Centre**) at the National University of Singapore and Elcora graphene is currently ranked No. 1 in the world by CA2DM in terms of quality due to the low number of layer, structural quality, crystallite size, carbon content and morphology. These results were presented by Prof. Antonio H. Castro Neto, director of CA2DM, at the Graphene Canada 2015 international conference in Montreal.

On January 11th, Elcora released the results of its graphene quality tests performed by the Centre for Advanced Materials (CA2DM, previously known as Graphene Research Centre), at the National University of Singapore. **More than 20 well-known commercial graphene producers** from North America and Europe were tested, as well as many less-known Asian suppliers. The test results indicate that the Elcora graphene is the top quality tested not only based on the overall evaluation but also all of the individual criteria: **Elcora's sample has the highest content of graphene flakes with the best structural quality as measured by stringent scientific criteria.**

- Among all the global graphene producers tested, Elcora graphene was found to have 55% of graphene content (the highest measured)
- Flakes averaged three layers (90% of the sample with less than 30 layers)
- Flake sizes are consistent with an average of one micrometre (90% with less than 3 micrometers),
- High structural quality and more than 93 per cent in carbon content.

In comparison, the second-best producer was found to have only 25 per cent graphene content with larger number of layers and smaller carbon content. CA2DM is planning to publish the results of its detailed studies in the near future.

Now this is what is very significant and what the market has yet to figure out

<u>The Graphene Research Centre (GRC)</u>, at the National University of Singapore (NUS), is the first centre in Asia dedicated to graphene research.

NUS established the GRC in 2010, under the leadership of <u>Prof. Antonio H. Castro Neto</u>, with a start-up fund from NUS of \$40 Million, 1,000 m2 of laboratory space, and a state-of-the-art clean room facility of 800 m2.

The GRC was established under the scientific advice of two Nobel Laureates in physics – Prof Andre Geim and Prof Konstantin Novoselov- who won the 2010 Nobel Prize in Physics for their discovery of graphene.

- Prof. Antonio H. Castro Neto is colleagues with Nobel price winners Giem and Novoselov. These are the first and brightest minds in graphene.
- The GRC just rated Elcora's graphene best in the world and far above the 2nd place finisher
- Antonio Castro Neto is a significant shareholder in Elcora and an Advisor

and it is not because they have a graphite mine

This is a clue with Elcora's Feb 10th announcement on a new graphene plant

Elcora is constructing its own graphene production facility in the Canadian city of Halifax, N.S., to supply premium quality graphene. The plant has a modular design wherein each "line" can produce 100 kilograms of graphene per year. The plant uses a graphite precursor specially processed and refined for the Elcora graphene process within the company's vertically integrated supply chain.

The current worldwide market for graphene is on the order of a tonne per year.

The company plans to increase production as the total market, and the company's market share, increases.

According to Dr. Ian Flint, Elcora's qualified person, the current value of graphene varies between \$5 and \$100 a gram depending on quality.

In addition, it will produce an additional 400 kg of high-purity micrographite that in itself is a valuable product with a value to the order of 20 cents to 30 cents per gram.

Just the by product (micrographite) if you compared it to flake graphite is \$248, 000 per ton

100 kilograms may not sound like much but remember graphene is only 1 atom thick and 100 kilo grams at \$100 per gram is worth \$10 million. I am using the higher price in the range because at this point we know Elcora has the best quality graphene in the world.

This will be scalable into a very lucrative business and Elcora says they will be in production within the 2nd quarter of this year, so just a matter of months.

However this is not the best part, the future deals and collaboration with leading tech companies that want Elcora's graphene will be worth much more.

If the market had this figured out the stock would already be priced in dollars not pennies

There is a very good and recent article on Elcora at investorintel.com

 $\underline{http://investorintel.com/technology-metals-intel/elcora-fully-committed-to-battery-production-nuclear-grade-graphite-and-true-graphene/$

Here are a few key points in this article

Prof Antonio H. Castro Neto, told me that Elcora's Sri Lankan graphite had the highest conversion rate to "true' graphene that CA2DM had ever seen. It cannot be overemphasized that Elcora's core competency is in world-class process engineering,

The CA2DM laboratory (GRC) has attracted funding in the order of hundreds of millions of dollars from the funding agencies in Singapore and its annual budget is in the tens of millions of dollars per year with its basic funding from the university and the government augmented by funding from Global1000 companies worldwide.

In fact Elcora's subsidiary, Graphene Corp. will be, as the company's external advisor on science and technology assures us, the world's first provider of "true graphene."

Finally, and this cannot be overemphasized, Elcora's costs of production of its industrial grade raw materials as well as its graphene and graphene products will be the lowest in the world. Thus its margins as well as its ability to compete will be world-class.

Professor Antonia Neto and Elcora have met with U.S. military



It is clear to see the breakout on the chart above \$0.35. It has also broke above the up trend channel and I find when this happens the stock either falls back or jumps higher and establishes a new higher trading range.

I would buy half your intended position now and buy the 2nd half if it falls back. Note the \$0.35 would now be support so that would probably hold the stock above that on any pull back. If the stock continues higher, at least you got a position. Of course if you own the stock I would continue to hold.

(c) Copyright 2016, Struther's Resource Stock Report

All forecasts and recommendations are based on opinion. Markets change direction with consensus beliefs, which may change at any time and without notice. The author/publisher of this publication has taken every precaution to provide the most accurate information possible. The information & data were obtained from sources believed to be reliable, but because the information & data source are beyond the author's control, no representation or guarantee is made that it is complete or accurate. The reader accepts information on the condition that errors or omissions shall not be made the basis for any claim, demand or cause for action. Because of the ever-changing nature of information & statistics the author/publisher strongly encourages the reader to communicate directly with the company and/or with their personal investment adviser to obtain up to date information. Past results are not necessarily indicative of future results. Any statements non-factual in nature constitute only current opinions, which are subject to change. The author/publisher may or may not have a position in the securities and/or options relating thereto, & may make purchases and/or sales of these securities relating thereto from time to time in the open market or otherwise. Neither the information, nor opinions expressed, shall be construed as a solicitation to buy or sell any stock, futures or options contract mentioned herein. The author/publisher of this letter is not a qualified financial adviser & is not acting as such in this publication. Struther's Resource Stock Report is not a registered financial advisory. Investors are advised to obtain the advice of a qualified financial & investment adviser before entering any financial transaction