Struthers Report V22 # 16.1 Gold, Drones FLT, Graphene, Elcora ERA, SYR Oct. 31, 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..

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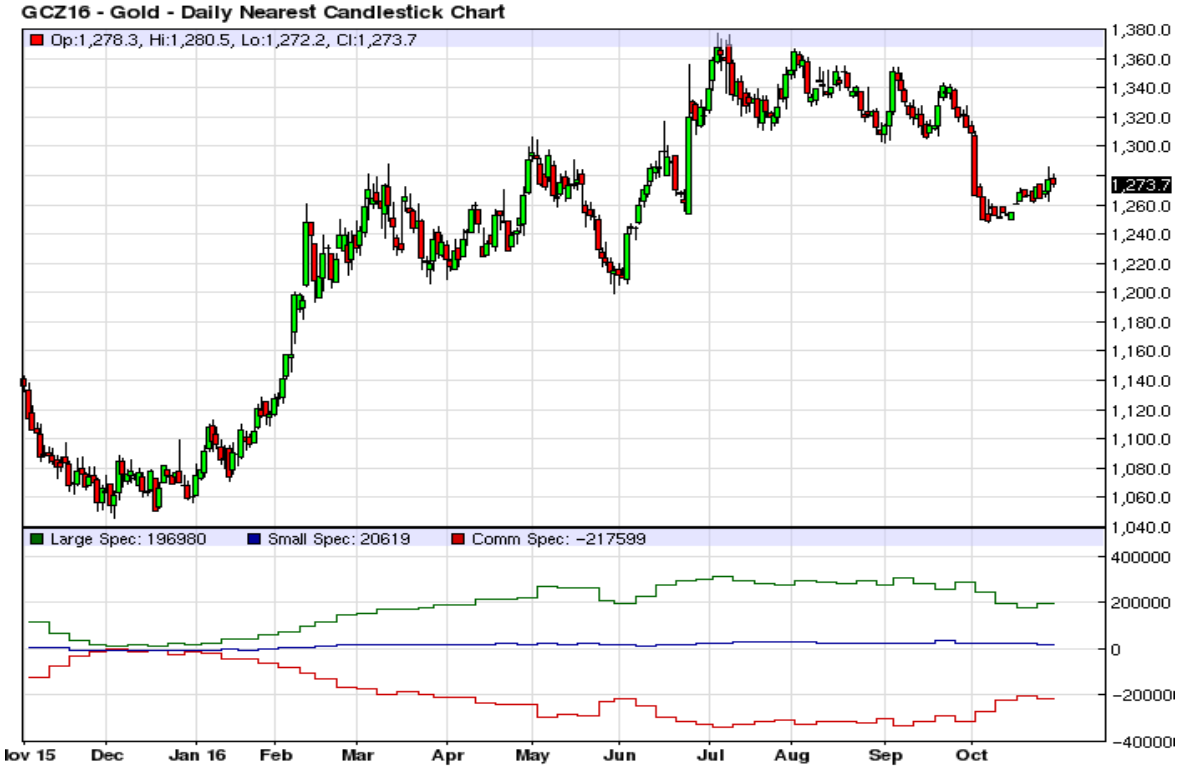
It's Halloween and probably the scariest thing I know is the US election race.

GOLD

Gold is trading sideways as expected but has seen a slight upward bias. Commercials seemed to have stopped their short covering around 200,000 contracts. Maybe that's all we will see, looking at the chart, the reduction thus far could be short positions added on above $1300 Gold price.



The Drones are coming

We know that lithium batteries are used in all of our electronics, phones, laptops and tablets etc., but the big hype has been about the huge demand expected with EVs and the gigafactories.

I was researching drones and I was simply astounded by some of the facts I found.

A report in May by PricewaterhouseCoopers LLP, cited the global market for commercial applications of drone technology, currently estimated at about $2 billion, will balloon to as much as $127 billion by 2020.

That is enormous growth of over 60 fold in just 4 years.

The FAA predicts 1 million drones will be sold this Christmas in the U.S. alone.

According to a report from retail research firm the NPD group, sales of drones have more than tripled over the last year to about $200 million. The NPD accounted for the twelve months ending in April 2016.

That is only in the U.S.

China's aerial photography drone shipment is expected to reach 390,000 units by end of this year, according to IDC, who also estimates that the number could skyrocket to 3 million over the next three years as drones become mainstream from a niche hobbyist product.

Over 100,000 drones were sold in Italy in 2015

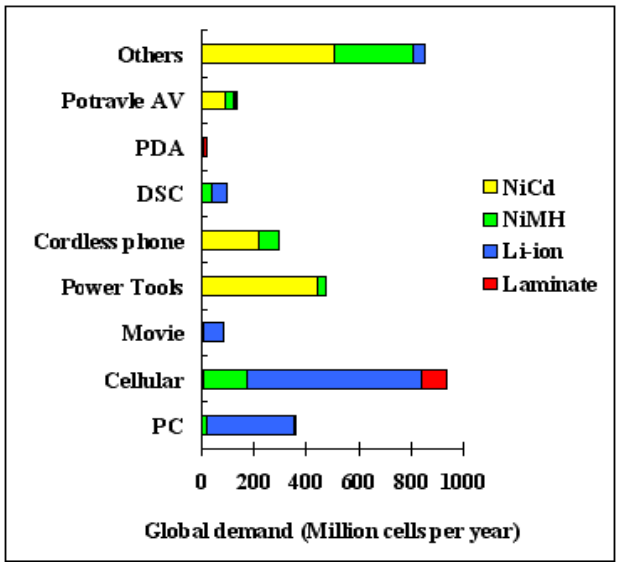
There are no good sources for statistics on this market yet, but looking at only the USA, China and Europe, it is easy to estimate between a few million to 8 million sales per year and growing at triple digits. **These numbers are just the consumer recreational market** and I have not factored in commercial applications that are here and expanding rapidly (60 fold in 4 years).

I could find no data on battery demand for drones, the market is hardly thinking of this, yet alone analyzing. The best way to look at it now is perhaps compared to laptop computers.

In 2015 there were about 11 million laptop sales in the U.S., so probably just a matter of 2 to 3 years and drones will match this.

Li-ion 18650 cells are common in laptops. Shaped like cylinders, they are 18 mm in diameter by 65 mm long. A typical notebook computer battery pack comprises of eight 18650 cells to allow it to operate for several hours between charges.

About 10 years ago, lithium-polymer (LiP) cells made their debut in the consumer market. Because of their thin, rectangular, customizable pouch-like shape, LiP packs were attractive to designers looking for space savings, especially in ultra-slim notebooks, smartphones, and tablets.



Above is the best chart I could find and believe this is 2015 data. It breaks it down to number of cells by device. Note, there is no category for drones but we can see that Cell phones are the largest demand and then the PC laptops.

Many of you know about the battery size in a laptop so I will compare to that. A small drone battery can be about 7 inches X 2.5 X 2.5 inches and weight just over a pound. This is a picture of a Drone with 4 motors. Note the size of the 2 batteries on top. The propeller blades are 10 inches so they look to be about 7 to 8 inches long and about 3 inches thick. From what I see, this is about the amount of batteries you would see in 10 laptops.

Considering that this Christmas about 1 million drone sales are expected in the U.S. and if they were all this size it would equate to 10 million laptops so almost the 11 million currently being sold in the U.S. However, many of the drones will be smaller so maybe we are talking the equivalent of about 3 million laptops.

My point being, once we see the commercial market take off and in most cases will be using even larger batteries. I did see the size of the batteries at Drone Delivery Canada and a battery pack is bigger than what you see above. I would surmise within a year or two, the battery demand from drones will out pace laptops and before long, laptops and cell phones combined.

Mostly because the drone batteries are so much bigger, perhaps between 50 and 200 cells per drone. This compares to around 7,000 cells in a Tesla, so we are looking at maybe around 2% of what you would see in an electric vehicle (EV). There will be multiple more drone sales though. In the 1st half of 2016 - 64,000 EVs were sold in the U.S. and at that pace about 130,000 for the year. There will easily be 10 times more drone sales.

These growth projections are great news for our one stock here,

Drone Delivery Canada CSE:FLT Recent Price $0.33
Entry Price $0.43 (reflects old Asher price and average down) **Opinion - buy**

Since my Sept. 9th update the stock is up 50% and volume has picked up.

October 4th Drone Delivery received a special flight operations certificate from Transport Canada. The certificate now allows Drone Delivery Canada the ability to advance its drone delivery technology and accelerated testing in the Canadian skies, beginning with Southern Ontario.

"Our drone logistics platform is quickly progressing to the Canadian skies. Not only are we the first and only drone logistics company in Canada, we now have just obtained a special flight operations certificate from Transport Canada allowing us to test fly with potential customers. This is a Drone Delivery Canada milestone which I am pleased to report we achieved six months ahead of schedule. We have large customer demand, and we are seeing vastly increased market acceptance of our business moving us closer to our commercial goals," commented Tony Di Benedetto, chief executive officer of Drone Delivery Canada.

http://www.dronedeliverycanada.com/

Batteries for Drones will easily become among the top three largest demand sectors along with EVs and energy storage. This will have a positive effect on graphite too.

Elcora TSXV:ERA OTC: ECORF Recent Price $0.37
Entry Price $0.13 Opinion - buy

If stars were ever lined perfect, it would be with Elcora. To most junior exploration investors their approach seemed off the wall, but they are not an exploration company. Elcora will be more of a processing company that also sells graphene and final products like batteries.

Many investors in Elcora are junior mining investors and I believe many do not understand the full extent of the potential of this company.,

And for good reason, there really has never been anything quite like this.

You only need a few fingers to count all Canadian graphite juniors with an off take agreement and you only need one finger to count how many made a shipment under an agreement. On Oct 4th Elcora announced their first shipment of graphite and they have over 1,000 tons stock piled ready for processing.

Few understand the graphite market and battery market more than Elcora's Dr Flint, Dr Antonio (the godfather) and Dr, Bueil of Coulometrics. People make companies, not things, properties or factories, this expertise is one of Elcora's key advantages.

Graphene the next wonder material – is a quote often seen.

After 30 years at IBM, I am a little bit of a tech junkie at times and see the odd big tech winner out of Canada.

I harped at everyone to buy Net One, who invented the smart card, known as your debit card today. The stock was bought out and merged a few times as things progressed but in the end was up several 1,000%.

I told everyone to load up on Research in Motion (Blackberry) when it IPO'd. Text message and the smart phone would be the next big thing. The stock went up over 5,000% but we sold half way up.

Elcora could be comparable to these previous techs **if** they can continue to progress farther with graphene and their batteries.

There is few companies we can use as graphene comparable s and they are at similar stages to Elcora. Two companies that I am aware of that actually produce graphene and they are both out of Britain. No surprise as that is where graphene was discovered,

Applied Graphene Materials - AGM on London trades around US$2 per share and has 19.7 M shares out so a market cap of US$39 million with production capacity of 6 tonnes per year graphene. Their revenue for the past year was only $0.3 million pounds and they have one commercial customer so far, Century Composites Ltd., that makes fishing rods.

Haydale 15.2M shares HAYD on London around US$2.20 – market cap US33 million. Haydale has developed a patented proprietary scalable plasma process to functionalise graphene and other nanomaterials. It does not appear they are making sales yet but have some customers experimenting with their product.

There is one company that trades on the **TSXV:GGG - Graphene 3d Labs** at $0.20 Market cap C$12 million. They have a product called Conductive Graphene Filament, and gives users the ability to 3D print circuitry and sensors for electronic applications. They just announced a graphene composite material intended for users in the automotive, robotics, drone and aerospace industries, as well as military sectors. This material will be marketed under the trade name of G6-Impact.

They are basically producing products that have graphene so a little different angle. They claim to have 10,000 clients, but revenue in the past year was C$773.000 so $77 per client, obvious most clients are not customers or simply tried out their 3D ink.

I should mention that Focus Graphite has exposure to graphene through its majority ownership of Graphoid and Mason Graphite has a 40% ownership in Group Nanoexplore.

Graphene was just recently discovered in the last few years and no doubt could be the most amazing substance seen in our lifetime.

I will note Elcora's Dr. Antonio Castro Neto who established, The Graphene Research Centre (GRC), at the National University of Singapore 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.

People make the difference and is probably why Elcora's graphene was top of the pack in recent 3rd party test results.

Last week, Oct., 26 Elcora announced their first shipment of graphene

The graphene meets all the high-quality specifications as tested by the Centre for Advanced 2D Materials at the National University of Singapore. The plant is ramping up production of graphene in powder and in wafer shape to meet demand following positive review of the product by its clients.

According to research done at the Centre for Advanced 2D Materials at the National University of Singapore, it shows that Elcora has generated a new and unique graphene production process with 55 per cent of graphene content. Many graphene production companies currently generate a thin graphite powder with only 2 to 10 per cent of graphene content.

"*This is an important milestone for the Graphene Corp. facility. The company is currently preparing graphene for subsequent shipments,*" said Troy Grant, Elcora's president and chief executive officer.

Subsequent shipments is a key item in this news release. Now Elcora has revenues from both graphite and graphene and although these are just starting up, they should continue to grow in size.

We were all expecting Elcora to start selling graphite from Sri Lanka and graphene out of their Nova Scotia facility, but what surprised me was news October 20th, that they actually produced lithium batteries with their graphite for testing.

Elcora testing industry standard 18650 cells.

Elcora starting full cell testing and qualification of its graphite material in industry-standard 18650 lithium-ion batteries (LIBs). After successfully demonstrating that Elcora thermally purified graphite could meet all of the standard requirements for LIBs using coin cells with lithium reference electrodes, Elcora has contracted with Coulometrics LLC to complete full cell assembly and final qualification of its graphite anode material.

These are the same cells used in laptops, drones and in EVs like Tesla. Elcora with Coulemetrics actually produced ten 18650 battery cells for testing. They are the first graphite company that I know of to actually test in the industry standard battery cell.

"Elcora's graphite has performed well in half-cell testing, demonstrated good manufacturing characteristics with respect to electrode coating and adhesion, and has been successfully wound into high-quality cylindrical 18650 LIBs, the same format used by automakers such as Tesla. We have now started full cell characterization testing and we are starting accelerated life testing on the finished cells. This will provide the necessary comprehensive information that will allow battery companies to use Elcora's graphite in the near future," says Dr. Edward Buiel, president and chief executive officer of Coulometrics LLC.

You can buy Chinese made 18650s on eBay for just under US$5 and closer to $3 if you buy 100 at a time.

Initial cycle results show that the capacity and efficiency of the cells are within normal parameters for good quality LIBs. Dr. Buiel further commented: *"Although significantly more cycles need to be completed, this level of performance and ease of use of Elcora graphite in the cell assembly process is a very good indication that Elcora processed graphite is very well suited for LIB applications. We plan to continue to work with Elcora to ensure that any issue that may arise during upcoming customer evaluations is addressed quickly."*

We have seen great news out of Elcora and I am expecting this to continue. More graphite and graphene sales and progress on batteries.

On the chart, volume has picked up and we can see steady buying with the On Balance Volume going positive. Not shown here is that trading in the US, has picked up with a few hundred thousand shares trading their in the last few weeks. We have resistance in this $0.37 to $0.40 area so I am watching for a break above $0.40

Syrah Resources ASX:SYR OTC: SYAAF Recent Price A$3.60
Entry Price $4.10 Opinion – buy

Last update on Oct. 26th - Balama Project remains on schedule for commissioning in Q2 CY2017, but budget has been increased from US$175 million to US$185 million to incorporate changes of scope, principally the introduction of attrition cells and additional on-stream analysis

The stock took a hit during September when I pointed out in an alert that Syrah announced the resignation of Managing Director Tolga Kumova. I did not think that news, issue was handled well.

Syrah now says it is part of a transition reflecting the evolving strategic direction of the Company and the key development activities it is currently undertaking. Chairman Jim Askew has stepped into an Executive Chairman role for the interim period and a global search for a new Managing Director has commenced with the objective of making this appointment within the next few months. Mr Kumova will remain with the Company as an advisor, focused on business development activities for the battery anode market, for at least 12 months.

I made comment before that they were contemplating a spherical graphite plant in the U.S. The Company is planning to provide a strategy update in relation to this in November 2016.

Could be interesting and I wonder if Tolga Kumova is involved?

For now I think the dip in the stock price is a good buying opportunity.