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By Chaim Even-Zohar

FOCUS ON THE MARKET'S
UNDISCLOSED SYNTHETIC
DIAMOND AVALANCHE

SYNTHETICS SPECIFICALLY 'MADE TO DEFRAUD'

Antwerp IGI Lab Discovers over 600 Undisclosed Synthetic Diamonds

INDUSTRY LEADERSHIP CONTEMPLATING STRONG RESPONSE

It started in **New York**. A respected diamond merchant bought in the market a parcel containing about 1000 of what he believed were – and were offered as – natural polished diamonds in sizes ranging from 0.30 carats to 0.70 carats. The colors ranged from F to J – colorless or near-colorless. They were of high quality and the buyer decided to submit the stones to the **IGI laboratory** in **Antwerp** for certification.

There, it was discovered that the submitted stones involved a mixed parcel of natural and synthetic diamonds. Well over 600 diamonds were actually man-made. But these diamonds were not just “ordinary” synthetics. The clarity range was VVS-VS. Internal characteristics were feathers, pinpoints, and small dark crystals. All these inclusions are strikingly similar to natural inclusions; hence, says the IGI lab, microscopic observation is insufficient to conclude whether they are natural or synthetic. The polish, symmetry and cut were either “Excellent” or “Very Good.” They showed bruted or faceted girdles.

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process not to make the stone more beautiful but solely to make the stone look more natural. As one source that saw the stones observed: "They were created to defraud."

The merchant who purchased the goods made a selection from an offering many times larger. This leads one to believe that the actual quantity of undisclosed synthetics in the market may run in the many thousands of stones worth many millions of dollars. The trade is facing a major challenge!

The goods were fully priced. According to a **London** trading source, the price differentials between natural diamonds and similar diamonds offered for sale on a **U.S.** synthetic polished website is about 50 percent. In many instances, diamonds as small as 0.30 carats are not submitted to labs for certification. In this instance, the diamond merchant who bought the stones made a lucky decision that probably spared his business from enormous future embarrassment and legal entanglement. Upon discovering well over 600 undisclosed synthetic stones, the Chairman of IGI, **Roland Lorie**, immediately informed **De Beers** and the leadership of the diamond industry.



IGI Chairman
Roland Lorie

De Beers Warned Clients

The sale of these diamonds in **New York** took place about six weeks ago. A few industry leaders were "in the loop" and actively deliberated what the next steps should be. Within days after learning of what happened, the **DTC** took action and released an alert to its sightholders. It was a unilateral move, not really coordinated with industry.

In its alert headed "Undisclosed submissions of CVD synthetics to grading laboratories," De Beers states as follows: "DTC Research Centre has been notified of *three recent instances of undisclosed submission of CVD synthetics to grading laboratories in Belgium, India and China.* In each case the synthetics had very similar characteristics and may therefore have had a common source."

DIB has learned that the submissions at the non-Antwerp labs involved fewer stones. (Also, there is an additional submission that is still being investigated. It involves a non-disclosed synthetic stone weighing two carats(!) submitted to the **GIA lab** in India.)

Regarding the three submissions cited by De Beers, the statement cautions that "the DiamondView and photoluminescence results indicate that the CVD synthetics have been heat-treated post synthesis and we note that the combination of characteristics listed above is strikingly similar to that reported by the GIA [Wang & Moses 2011] for 16 CVD

synthetics received from Gemesis Corporation." [The full DTC statement is published elsewhere in this issue.]

IGI Notified all Global Gem Labs

IGI principal **Roland Lorie** and the lab's global head, **Herman Brauner**, quickly followed the De Beers action by alerting every gemological laboratory in the world. In a "dear colleagues" letter, they wrote that "during the past weeks, a few hundreds of CVD synthetic diamonds were submitted to IGI laboratories in **Antwerp** and **Mumbai**, with the clear aim to have these man-made diamonds certified as natural diamonds.

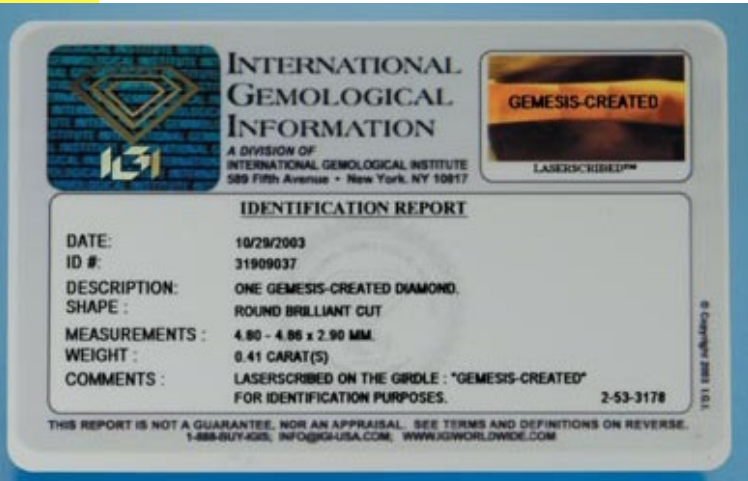
"In each case the synthetics had very similar characteristics and may therefore have had a common origin. IGI readily identified these as synthetic diamonds. The purpose of this lab alert is to warn members of the gemological community, and urge them to be particularly vigilant."

Labs have a fiduciary responsibility to their clients; they are also contractually committed to confidentiality. They do, however, also have a larger responsibility to their profession and to the industry. Lorie and Brauner's courage need to be acknowledged. They did more than just alert the labs. As they pointed out: "due to the recent volumes of man-made stones submitted, IGI management decided to liaise and consult with the **Belgian Federation of Diamond Bourses (BFDB)**, **DTC Research**, and the **AWDC**. Additionally, IGI decided to share detailed scientific information with other gemological laboratories around the world, as we now suspect that the volumes of colorless synthetic diamonds being released on the global markets have increased noticeably, and may perhaps already be prevalent throughout the diamond centers."



The IGI has enormous experience in recognizing synthetic stones, especially those created by **Gemesis**. Gemesis uses IGI's New York laboratory to secure a Synthetic Diamond certificate for all of its lab-created (or cultured) diamonds of 0.25 carats

and up. These polished are laser inscribed with an identity name and number as part of the certification process. Therefore, IGI is particularly well situated to recognize the most likely producer of the synthetics. [The full text of the IGI alert is published elsewhere in this issue.]



Criminal Complaints Must Be Filed with Police

Let's face it: this regrettable and miserable mixing of natural and synthetic diamonds that were traded as naturals was something that was going to happen sooner or later. The writing had been on the walls. It always was a matter of "when" rather than "whether." This requires the trade, the producers, the banks, the industry, the trade press – essentially all stakeholders – to make it abundantly clear that this kind of criminal behavior will not be tolerated in our trade.

The diamond bourses have extensive internal arbitration and dispute settlement mechanisms. *Fraud cannot be arbitrated. Criminals belong in jail.* The relevant diamond bourses and/or the **World Federation of Diamond Bourses** and/or the injured party himself must come forward and involve law enforcement. A crime has been committed. As far as we know, the Antwerp or New York police have not been called in yet – and members of the organized trade should ask their elected representatives: *what are you waiting for?*

Confiscation of the Undisclosed Synthetics

Those involved must, in first instance, be suspended or expelled from every bourse in the world. Every diamond trader – anywhere

in the world – should refrain from doing any business with a party that for its own reasons of greed was willing to jeopardize the entire worldwide diamond consumer market.

At this point in time we don't know how many diamond dealers have unwittingly sold synthetics under the guise of natural diamonds to retailers. There should be no hesitation by industry leaders; it is clear what needs to be done. There are no other options.

A member of the industry has been defrauded – in a massive way. The most obvious person to take action would be the diamantaire who purchased the goods. Now comes the catch: he bought the goods on 60 days credit. He hasn't paid for the diamonds. The seller – quite obviously – would like the merchant to return the goods. The buyer has given his word that he will pay for the purchase.

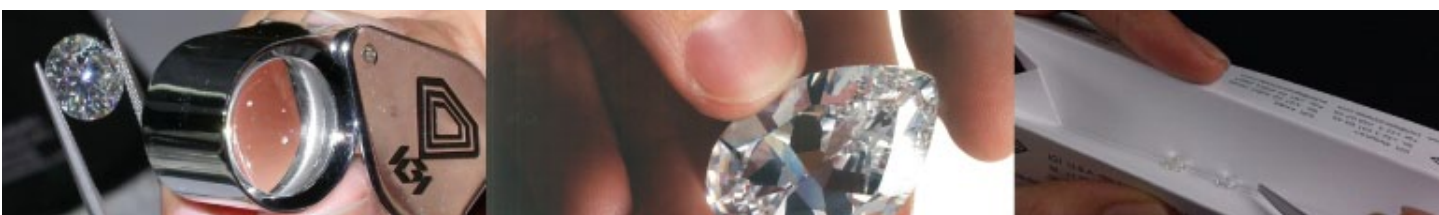
Technically speaking, how does one export non-diamonds (synthetics) that have been cleared through the **Antwerp Diamond Office** as "natural diamonds"? Actually, false and fraudulent import documentation has been provided to the (governmental) Diamond Office. What action will it take? Or has action already been taken? The Diamond Office certainly is empowered to impound or confiscate the goods. The most logical course of action would be for the goods to be submitted to the police as evidence in a crime.

It is obvious that the industry did not have a contingency plan; it didn't have a "blueprint" for what to do in such cases. That certainly must be remedied – and before the next event.

Detection is Possible – The Challenge is Not Insurmountable

Actually, the diamond pipeline has quickly identified the fraud. That is quite encouraging. The industry should take comfort in realizing that, in fact, detection has actually become quite easy. IGI detected the synthetics using De Beers' detection equipment, and a vigilant trade using the same equipment could easily do the same. The industry is not at the mercy of fraudulent behavior. On the contrary.

De Beers and others have spent millions of dollars on devising the equipment that can provide reassurance to both the trade and consumers. What the last few days have taught is that when detection equipment is used, this becomes a manageable problem with a strong deterrent. Detection is easy. *It is up to the industry to keep our customers informed and to display the political and commercial courage to rise to the challenge posed by fraudulent undisclosed trading in synthetics.*



The Mystery of Two Gemesis Companies under One Hat

The alert by the **DTC** to its sightholders notes that the undisclosed synthetic diamonds submitted to the **IGI** and other labs have characteristics similar to known **Gemesis** laboratory-grown materials, a conclusion based mostly on scientific literature. **Diamond Intelligence Briefs** has therefore made an effort to investigate whether, for all practical purposes, it could be possible that non-disclosed polished made from Gemesis-grown synthetics could be available in the market. Our investigation led us in strange directions. **Chaim Even-Zohar's** report follows:

According to its website, "Gemesis is the principal producer of gem-quality lab-created diamonds and jewelry. Available in the purest Type IIa colorless and rare fancy yellow colors, these diamonds possess the same exceptional cut, color and clarity, as well as identical chemical, optical and physical characteristics as the highest-quality mined diamonds – the only differentiator is point of origin."

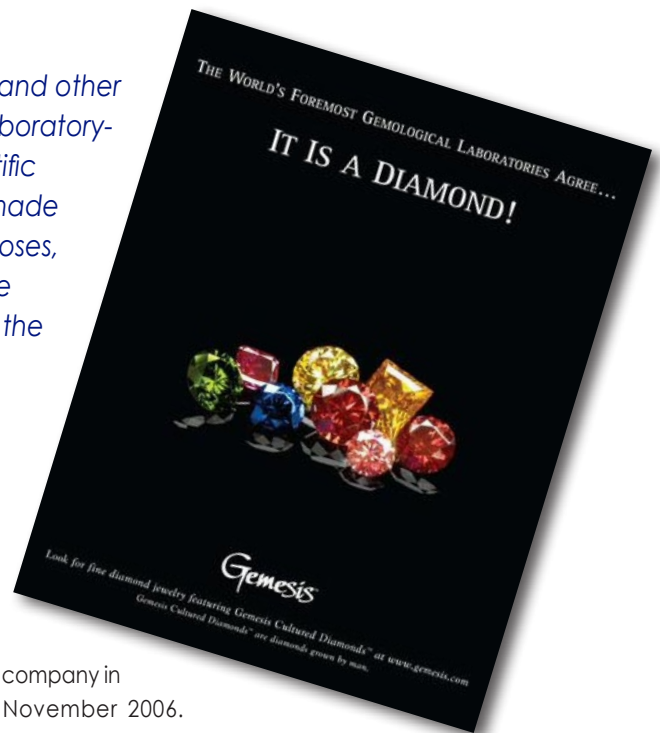
Continues the website: "Privately-held, Gemesis has the world's largest facilities comprised of **High Pressure-High Temperature (HPHT)** and **Chemical Vapor Deposition (CVD)** diamond production. Using these methods, Gemesis is able to bring to market high-quality colorless and fancy color diamonds that have all the beauty of their mined counterparts and offer tremendous value when compared to mined diamonds with the same characteristics."

In terms of product disclosure, Gemesis states that its "lab-created diamonds are certified by an independent third-party institute [i.e. **IGI, New York**. Editor]. Each polished diamond over one-quarter carat in weight comes with a diamond grading certificate. Gemesis is committed to maintaining supply chain integrity and providing knowledge of origin of its products."

The company's current Chief Executive Officer and President is **Stephen Lux**, who joined the



Stephen
Lux



company in November 2006.

The current marketing model of Gemesis calls for the selling of synthetic polished through a website – but that method has only been in operation for a few months. An analysis of its website shows an online stock of some 3,200 colorless stones of which 3,000 are in the 0.30-carat – 0.80-carat range. It also has some 820 fancy stones on offer, 500 of which are in the 0.5-carat – 1.0-carat range.

Selling prices seem to be about 50-60 percent below their natural counterparts. A back-of-the-envelope exercise as to what these stocks might be worth at production costs would draw one to conclude that the company's unsold inventory is worth less US\$2 million, at best.

Background on Gemesis

The **Gemesis Corporation** was incorporated in the state of **Delaware, USA**, in 1996. At that time, **Thomas V. Buffet** and **Carter W. Clarke** were co-chairmen. Clarke, a retired Brigadier-General, had stumbled on a synthetic diamond-growing machine in Russia; he bought it and that was the beginning of the company. It had then two Russian directors, **Vladimir V. Kozlov** and **Yuri K. Semenov**, who had brought the Russian HPHT technology to **Florida**, where the Gemesis headquarters and synthetic production facilities were established.

It took the company about seven years to get its synthetic

Gemesis Florida Lab in 2007



production on stream. By 2003, it had 23 diamond-growing machines with a combined capacity of 30,000 carats of rough per year. By 2008, an annual production capacity of 100,000 carats had been reached. In that year, its building facilities were greatly expanded. Gemesis also produced its first 7-carat rough stone.

In terms of pricing its polished stones, in 2006, its vice president for marketing, **Chuck Meyer**, said in an interview: "we found that a price point roughly 70% less than the price of comparable mined diamonds was extremely attractive to the consumer. We're able to hold that price point while still providing margin." However, Meyer was gone before the interview was published....

In these years, Gemesis was selling both polished and rough to the trade. The **Renaissance Diamond Corporation**, for example, was one of those holding a rough purchasing contract from 2007. There were more. When the economic crisis commenced in 2008, things went southward. By 2010, Gemesis was in dire financial trouble.

Jatin Mehta's Family Bails Out Gemesis in 2010

In phone interviews and in several e-mail exchanges over the past few days, Gemesis Chief Executive Officer Steve Lux was extremely protective about proprietary information of, what he said, is a private company. Lux was unwilling to talk about shareholders. In a transparent good-governance environment, especially in the diamond industry, visibility on shareholders instills confidence. Hiding such information leads to suspicions and market gossip. (It must also not be ignored that in the current environment of **anti-money laundering** and the **combating of terrorist financing** (AML/CFT), diamond merchants – as high-value dealers – must conduct due diligence (Know Your Client) on trading partners as called for by national legislation in many countries and according to FATF rules. In the case of trading with corporate entities, knowing the beneficiary owner is of utmost importance.)

Documents in our possession show that a bailout of the company took

place in January 2010, when **Jatin R. Mehta**, the principal of **Su-Raj Diamonds**, a public company in India, acquired a controlling interest in Gemesis through his son, **Vishal**. The new owner committed to investing US\$8.4 million into Gemesis over a period of three years. In return, he received 50.1 percent of the company's equity on a fully diluted basis. Mehta assumed hands-on control, making all major decisions.



Jatin R. Mehta

Jatin Mehta is a formidable force in the diamond business, which he joined in 1974. In 1986, he was one of the first entrepreneurs that took his diamond business public in **India**. In the late 1980s and early 1990s, Jatin served as Chairman of the **Gem & Jewellery Export Promotion Council** (GJEPC) of India. He is legendary for his excellent relations with Indian government ministers and other top politicians. Some five years ago, he started to lobby government and the GJEPC on synthetic diamond-related issues. The day-to-day management of Gemesis is vested in **Vishal Mehta** and his wife, **Sonia**.

A few months after assuming control, the new owner changed the name of the company from The Gemesis Corporation to **Gemesis Diamond Company**.

Moving Synthetic Production to the Far East

Mehta wanted to move out of the **United States** to be closer to the production facilities. As such, towards the end of 2011, all the diamond growth chambers hitherto located in **Lakewood Ranch, Florida**, were relocated to **Malaysia**. Apparently, it was also felt that the company's intellectual property was better protected there; production costs would come down as well. Moreover, as Lux told shareholders, "as plant expansion is implemented, government financial incentives will benefit the Company." The Malaysia facility thus houses the HPHT synthetic diamond-growing chambers.

A casual internet search shows a handful of recruitment advertisements from the **Gemesis Malaysia Sdn Bhd** for a wide range



of administrative and technical positions for the company's new facilities located at the **Prai Industrial Estate in Prai Pulau Penang**.

In the meantime, the Gemesis headquarters and production facility located in **Sarasota, Florida**, have been closed. A skeleton staff remains in a different Florida location, where mainly the administration, marketing and research and development functions are housed. In its new business model for the United States, Gemesis has established its order fulfillment center in **New York** – just for serving website online orders.

Gemesis: Selling Rough and Polished

The company seems to be changing its business model and now aims to sell directly to consumers. In an update to shareholders, dated November 2011, **Steve Lux** reports that "the company has been working nonstop to properly complete and launch our new e-commerce website. It was the desire to report that the new Gemesis website, which would facilitate the sale of our diamonds and jewelry directly to consumers, was up and running. However, that event has yet to occur."

That is a significant message. How did Gemesis market its output throughout 2011 when its equipment (dozens of grow chambers) was moving to Malaysia, its new e-commerce model wasn't operational yet, and when it really needed cash flow?

Lux provided his remaining minority shareholders with an answer in his report on the company's operations for the first nine months of 2011: "Sales of the Company products have been limited during this period, as shown on the attached financial

reports, which primarily reflect limited rough diamond sales with long term customers and some direct sales of the select polished diamonds. This is expected to change dramatically once the new website is activated and sales to retailers is slowly but carefully expanded."

Thus, there were rough diamond sales to long-term customers and some sales of select polished diamonds. Actually, there were mostly synthetic rough diamond sales. There is nothing wrong with that – synthetic producers are allowed to sell their output to anyone they want. Rough sales are consistent with the company's old business model. Its new model isn't yet operational – or wasn't at the end of 2011, when Lux wrote his report.

As synthetic rough was sold, it is, theoretically and practically, quite possible that there could be Gemesis polished on the market that doesn't carry the disclosure inscription, and it therefore may be sold by unscrupulous persons. From a good governance perspective, there would have been an opportunity for Gemesis to offer assistance in finding out if something like this could have happened. At the end of the day, unscrupulous sellers of the Gemesis product without disclosure would inflict enormous damage on Gemesis itself.

However, when Lux learned about us holding information on Gemesis rough sales, he reacted as follows: "I am not sure what 'information' you are referring to, but if it is an internal shareholder report or something similar, you are drawing an incorrect conclusion. For internal accounting procedures and cost analysis purposes, we record the conversion of rough to polished as a 'sale and buyback'."

We informed Lux that his reply is wholly inconsistent with our information, nor could we see any sales and subsequent buy backs in the company's financial reports. Other sources familiar with Gemesis confirmed to us that rough sales did take place. Also, it doesn't make sense for Gemesis to buy anything back – as it was (and is) operating deeply in the red. It needs any sale it can get. (Out of respect to Jatin Mehta, we will refrain from publishing the detailed financials; Steve can do so himself, if he wishes.)

Lux stresses "with respect to end sales to our consumers via the website or to the trade in limited quantities, we sell ONLY polished diamonds." The reality is that the sales portion of their website has only been operational for a couple of months. That's semantics. We are mainly interested in the period before the e-commerce website became operational.

Singapore: NOT Related to Gemesis USA

There is some mystery around the company's Singapore operations. When I interviewed Steve Lux, I asked him several times whether he was also the Chief Executive Officer of Gemesis in Singapore. He avoided straight answers. He merely assured me that he is fully in charge of global Gemesis man-made diamond sales.



Recruitment ads for the Singapore facility state as follows: "The Gemesis Company (S) Pte Ltd is involved in production of very high quality diamond crystals. The Company uses chemical power vapour deposition technique to grow these crystals. These crystals are cut into rectangular shape of typical sizes and prepare for industrial use such as heat sinks for mounting high power laser diodes and integrated chips. We also endeavor to develop optical grade diamond crystals for gem and other commercial application. The Company is currently located in Woodlands, Singapore and is planning to expand into a Multi National Corporation based in different countries."

A few things are of significant interest here: **Singapore** is a CVD facility, while **Malaysia** houses the HPHT capabilities. The ownership and management of the Singapore entity seems (and is) different from that of the **Gemesis Diamond Company, Mumbai** market sources tell me about a renowned nuclear scientist that is now working with **Jatin Mehta** – clearly Mehta's entrepreneurial skills are only second to his preference for low-profile secrecy and staying below the public radar.

The Malaysia recruitment ads invariably state proudly: "Gemesis is the world's leading producer of HPHT gem quality cultured diamonds with its headquarters situated at Florida, USA." None of the Singapore company's ads make any reference to the U.S. company. (Needless to say that Jatin Mehta didn't respond to my e-mails.)

Gemesis Singapore Directors and Shareholders

Let there be no illusion among **Gemesis Diamond Company** shareholders: they are not direct shareholders of the Singapore company. Corporate records list only two shareholders: **Sonia Jatin Mehta** and **JRD International Limited**. (JRD is an offshore company located in **Nassau**.)

Lux had good reasons to avoid a straight answer: he himself is not even on the board of Gemesis Singapore. That separate company has five directors: **Vishal Jatin Mehta, Sonia Jatin Mehta, Jocelyn Yap Ching Ching, Girija Prasad Pande and Michael Nguan Tan Teck**.

In recent interviews (in the general **Indian** press), Lux stresses that Gemesis will only sell to retailers and consumers in the United States. We conjecture that Jatin Mehta has divided the markets: The Florida Gemesis (with the Malaysia facility) will serve the United States. Singapore will take care of the rest of the world. (Lux disagrees with my conclusions; see box with his comments.)

Gemesis in the United States concluded at the end of 2011 another agreement with a "strategic investor" – this time for US\$60 million, to be paid over a period of 18-24 months. No, I don't know who it is – but it is a safe bet that his/her last name is Mehta.

The old traditional founding Gemesis shareholders have, by now, been diluted to near to nothing. (Unless, of course, they exercised a rights issue - a *one-time opportunity* that was offered to them to purchase shares at the same price as the



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Due to our rapid expansion , we are seeking for self-driven and highly motivated individual to join us, do drop your detailed resume to [document.write\('u0065u006D\u0069\u006C\u0079\u0040\u006F\u006F\u007A\u006F\u0065\u006D\u0069\u002E\u0063\u006F\u006D\u002E\u0073\u0067'\)](mailto:document.write('u0065u006D\u0069\u006C\u0079\u0040\u006F\u006F\u007A\u006F\u0065\u006D\u0069\u002E\u0063\u006F\u006D\u002E\u0073\u0067')>emily_lilow@nczomi.com.sg)

Design Engineer

(Singapore)

Responsibilities:

- To develop detectors of various types
- Experience in fabrication of fine equipment
- Experience in soft hand skill

Requirements:

- Candidates must possess at least a Diploma in Mechanical Engineering
- At least 2 years of working experience in semi conductor environment
- Only Singaporean or SPR may apply



Gemesis Malaysia Sdn Bhd

Gemesis is the world's leading producer of HPHT gem quality cultured diamonds with its headquarters situated at Florida, USA.

Gemesis has expanded its horizon to Asia Pacific region. Early of year 2011, we have set up a facility at Penang.

In line with the expansion goals, Gemesis is continually searching for competent, passionate, self-motivated, dedicated and dynamic individuals to build a winning organization.

If you are the one who meets the requirements of this position and possess the right attitude and desire to build a successful career in consistent with our goal, please apply to us now.

As a new company, we offer tremendous opportunities in career growth and continuous learning and professional development.

Electrical & Instrument Engineer (with charginan certification)

Penang - Prial

Responsibilities:

- Coordinate and supervise the detailed phases of engineering design and site work, including part equipment installation (switchboards, transformers, cooling tower, instrumentation and control system etc), performance evaluation and commissioning.
- Manage external contractors/ suppliers in process control and instrumentation work
- Identify opportunities to reduce operations cost and enhance operational efficiency
- Actively involved in instrumentation and PLC design, modifications, troubleshooting and maintenance
- Provide technical knowledge of instrument standards and for the implementation of predictive and preventive maintenance programs. Coordinate and Monitor the effectiveness of the programs.
- Prepare and review of test & commissioning procedures
- Trouble shoot and resolve problems in control and instrumentation for electrical and instrument matters
- Prepare technical documentation such as specifications, drawings and schematics, layout drawings, functional design specification, cable schedule, installation, testing and commissioning procedures as well as operating and maintenance manuals
- Technical and functional supervision of staff and contractors
- Ascertain proper calibration and testing of instruments. Maintain all the calibration and testing logs.
- Any other relevant duties and responsibilities as assigned by the management from time to time

strategic investor to maintain their present level of ownership at the conclusion of the aforementioned agreement.)

Remaining minority shareholders must have been happy to learn from Lux that almost two decades after its founding, the company now has “a realistic probability of achieving the objective it set for itself upon inception, to become the undisputed global leader in the field of laboratory-grown diamonds and to become a major presence in the global diamond industry.”

An innocuous remark in the DTC alert to shareholders on the similarity of characteristics found between lab descriptions of the undisclosed polished synthetic stones submitted to some labs and the available scientific literature, which led us to look at Gemesis to begin with, may not (yet) have led us to the answers we were looking for. However, what we discovered certainly widens the market's understanding of Gemesis. From now on, any time one looks at synthetics and contemplates that they might come from Gemesis, the right question to surely ask is: “which Gemesis?”

TRANSFER-PRICING ASPECTS

Gemesis synthetic diamonds may be subjected to both CVD and HPHT synthesis. The sale of the company's **Singapore** production, as **Stephen Lux** has clarified, is part of the global (i.e. **U.S.**-managed) distribution network. As **Singapore Gemesis** and **USA (Delaware) Gemesis** are not owned by the same ultimate beneficiaries, the issue of transfer pricing (i.e. profit shifting) becomes quite relevant. Transactions between Singapore and the USA must take place on an arm's length basis – as if they were made between unrelated parties. Are there other CVD and HPHT “service” arrangements with clear market pricelists enabling the comparing of arm's length prices? Gemesis minority shareholders may take comfort in knowing that the **Inland Revenue Authority of Singapore** (IRAS) has issued stringent Transfer Pricing Rules that are embedded in the **Income Tax Act** (SITA). Nevertheless, this aspect should be considered by minority shareholders whenever a rights issue comes up. Probably, the sooner minority shareholders are “bought out,” maybe the better it is... for all.

Comments by Gemesis CEO Stephen Lux

Dear Chaim,

I appreciate that you are sharing your journalistic instincts with me, and that perhaps leads you to certain assumptions. However, such assumptions will carry some degree of risk of being wrong – very wrong – and won't solve the problem at hand.

As you state, Gemesis has been guarded in any information that we share about the company, our structure, investments, and overall capabilities. That is our right as a private corporation. However, we have also been the only one to truly be forthcoming about exactly what we are selling to the public. We both know there are several other companies that are practicing the CVD technology, with some scale as to have capability for the few hundred diamonds that most unfortunately have been sold inappropriately.

You, as well as DTC and IGI, know that CVD diamonds, whether made by Gemesis or others, will be indistinguishable from each other. The fact that Gemesis has been the most open in terms of working with the grading labs, and then going through the step of certification (and laser engraving the source) for several thousand of our diamonds, seems to be the greatest reason for your assumptions.

Gemesis has been very consistent and clear in our commitment of full disclosure. That has not and will not change. We have the very same concerns as you and the entire mined diamond industry have regarding the attempt by someone to inappropriately and fraudulently pass lab created diamonds as mined. We also hope that this unfortunate event will encourage the industry as a whole to be more proactive in assuring the success of lab created diamonds in the right way. The Gemesis way. All of the other “players” who have had some degree of success need to come from underground and you need to help in that matter. A constant atmosphere of controversy and angst is not conducive to this happening in an open manner.

Finally, I will state to your various observations the following. Yes, it is true that Gemesis was on the brink of bankruptcy at an earlier period. You can see now that the company is moving forward and becoming well known. The expenditures on the website, marketing efforts, capacity and stockholding are now significant. The Company has a long term focus consistent with the evolution of the growing presence of lab created diamonds. I can assure you with 100% certainty that Gemesis has not been involved in selling rough diamonds as mined, and the undisclosed diamonds referenced in the DTC and IGI alerts are not Gemesis diamonds. All of our diamonds grown globally are sold through the U.S. as polished diamonds. While the American market was the initial target, the international interest has been significant, and we have since modified our sales practice to ship virtually worldwide.

Just because an unscrupulous supplier may have CVD diamonds that demonstrate the high quality of Gemesis does not mean they are Gemesis. We would be most interested in learning about any further developments.

Stephen Lux

INTRA-LABORATORY ALERT

Undisclosed Submissions of Colorless to Near-Colorless CVD Synthetic Diamonds to IGI

Dear Colleagues,

During the past weeks, **a few hundreds of CVD synthetic diamonds were submitted to IGI laboratories in Antwerp and Mumbai**, with the clear aim to have these man-made diamonds certified as natural diamonds.

In each case the synthetics had very similar characteristics and may therefore have had a common origin. IGI readily identified these as synthetic diamonds.

The purpose of this lab alert is to warn members of the gemological community, and urge them to be particularly vigilant.

The CVD synthetics submitted in unusually large numbers were as follows:

- Mostly F to J Color, Clarity VVS – VS. Internal characteristics were feathers, pinpoints, small dark crystals. The inclusions are strikingly similar to natural inclusions, hence, microscopic observation is insufficient to conclude.
- Sizes ranged from 0.30 ct to 0.70 ct.
- Polish, Symmetry and Cut were either "Excellent" or "Very Good".
- Bruted or faceted girdles.
- They were all type IIa and were referred as such by DiamondSure.
- When tested using DiamondPlus all the synthetics gave a "refer CVD" result.
- When viewed in DiamondView they showed bluish green fluorescence and blue phosphorescence, with characteristic striations.
- The synthetics showed moderately strong photoluminescence from H3 and nitrogen-vacancy optical centres (zero-phonon lines at 503 nm and 575/637 nm respectively).
- They also exhibited photoluminescence at 737 nm that is attributed to silicon-vacancy centres.
- Absence of any laser inscription.

Due to the recent volumes of man-made stones submitted, IGI management decided to liaise and consult with the Belgian Federation of Diamond Bourses (BFDB), DTC Research, and the AWDC. Additionally, IGI decided to share detailed scientific information with other gemological laboratories around the world, as we now suspect that the volumes of colorless synthetic diamonds being released on the global markets have increased noticeably, and may perhaps already be prevalent throughout the diamond centres.

Trading in misrepresented or undisclosed products, whether inadvertently or not, could cause irreparable damage to the industry's reputation. Furthermore, such irresponsible practices could undermine the integrity of the diamond supply chain, damaging both trade and consumer confidence.

These recent events emphasize the importance of having ready access to methods for detecting synthetics. Parcels of stones containing unusually high proportions of type IIa's should be treated with particular caution.

In most cases we know of, the parties who submitted these stones to IGI purchased these undisclosed synthetics at prices that were equivalent to prices of natural diamonds.

CVD synthetic diamonds are undetectable when using only traditional diamantaires' tools such as loupes and microscopes. Therefore, gemologists' expertise is of paramount importance.

All 18 IGI labs worldwide have the ability to detect synthetic diamonds as well as all diamond treatments. Gemological laboratories like IGI are continuously being challenged due to rapidly evolving technologies. The laboratories' role in preventing undisclosed man-made materials from being traded as natural stones is therefore taking on an increasingly vital role.

If you have any queries, please do not hesitate to contact us.

Sincerely yours,

Mr. Herman Brauner - IGI
laboratory@igiworldwide.com

Undisclosed Submissions of CVD Synthetics to Grading Laboratories

DTC Research Centre has been notified of three recent instances of undisclosed submission of CVD synthetics to grading laboratories in Belgium, India and China. In each case the synthetics had very similar characteristics and may therefore have had a common source. They were readily identified by the gemmological laboratories involved (IGI and NGTC) but members of the trade should take note of the particular characteristics of the CVD synthetics and of the need to be particularly vigilant.

- The CVD synthetics were near-colourless (F - J colour.)
- Sizes ranged from 0.3 ct to 0.6 ct but the majority have been 0.5 ct - 0.6 ct.
- They were type IIa and were referred as such by DiamondSure.
- When tested using DiamondPlus all the synthetics gave a "refer CVD?" result.
- When viewed in DiamondView they showed bluish green fluorescence and blue phosphorescence, with characteristic striations.
- The synthetics showed moderately strong photoluminescence from H3 and nitrogen-vacancy optical centres (zero-phonon lines at 503 nm and 575/637 nm respectively).
- They also exhibited photoluminescence at 737 nm that is attributed to silicon-vacancy centres.

The DiamondView and photoluminescence results indicate that the CVD synthetics have been heat-treated post synthesis and we note that the combination of characteristics listed above is strikingly similar to that reported by the GIA [Wang & Moses 2011] for 16 CVD synthetics received from Gemesis Corporation.

Members of the trade should be aware of the key role that proper disclosure of products plays in maintaining consumer confidence. Trading in misrepresented or undisclosed products, whether inadvertently or not, could cause irreparable damage to reputation. Furthermore, such irresponsible practices could undermine the integrity of the diamond supply chain, damaging both trade and consumer confidence in buying diamonds. Key grading laboratories have the ability to detect synthetics and these recent events emphasise the importance of having access to methods for detecting synthetics and only buying from sources that can be trusted. Parcels of stones containing unusually high proportions of type IIs should be treated with particular caution.

PRESS RELEASE WFDB Recommends Vigilance After Undisclosed Synthetics Alert

Antwerp: May 21, 2012

World Federation of Diamond Bourses (WFDB) President **Avi Paz** has stressed his commitment to facilitate the full identification of synthetic diamonds and their disclosure, following a recent alert by DTC and diamond grading laboratory IGI.

Last week, IGI and DTC issued alerts to the diamond community, informing them of undisclosed submissions of colourless to near-colourless CVD synthetic diamonds with the clear aim to have these lab-grown diamonds certified as natural diamonds.

Avi Paz stressed that the WFDB specifically requires its members to identify synthetics and disclose any treatments used on diamonds: "Our affiliated bourses are making every effort to inform their membership of the latest developments in this sensitive area." The world diamond bourses have established clear rules regarding the trading in misrepresented or undisclosed products, whether inadvertently or not. Any violation of these rules are referred to the Bourse for disciplinary action and can be grounds for suspension, expulsion, fine or other appropriate disciplinary measure.

"Our members are fully aware of their responsibility to protect the integrity of the diamond trade. Our structure is such that we cannot tolerate any misuse of the reputation of our business. These recent events emphasize the importance of buying from sources that can be trusted. Trading with members of a WFDB affiliated diamond bourse is a way of protecting the trade against infiltration of undisclosed treated diamonds. Together with the diamond laboratories, which have the means and technological instruments to detect man-made and treated diamonds, our affiliated bourses provide assistance in identification techniques and a secure structure. It is in the interest of our global business that it remains transparent so that consumers can receive full disclosure about the diamonds they purchase."

