



sustainable mineral recovery

**CONFIDENTIAL  
TO GEO40  
SHAREHOLDERS**

# QUARTERLY UPDATE TO SHAREHOLDERS

## Calendar Q2 2024

**We continue to build momentum in 2024, with another strong silica sales quarter and completion of work on our first North American lithium piloting site. We worked in the Permian Basin for almost seven weeks, successfully processing three different brines for a household-name oil and gas company. We have also signed a contract to permit piloting with another large oil and gas company that will see us move our lithium field testing pilots to Louisiana in the coming days. Being out on site at the well-head has certainly made the sector take note, improving the quality of the opportunities we are being offered. This is particularly exciting as we look toward committing to the build of a lithium demonstration plant. Work towards licensing our silica technology with geothermal majors continues, with us awaiting a tender decision on micro-piloting our technology at one site and having agreed high-level commercial terms to micro-pilot on two other sites. Our strategic approach in both silica and lithium is certainly finding favour, creating strong opportunities for us.**

In silica product sales, a second strong selling sales quarter resulted from both structured focus across our four key market sectors and from our tactics to target higher-value market niches.

Fieldwork at our first lithium site in the Permian Basin largely validated our hypothesis that our Direct Lithium Extraction (DLE) technology can work economically on fluids with relatively low lithium grades. As we mature our technology we are now increasing our focus on technically outperforming our key competitors.

This quarterly update has been prepared by Geo40 Limited (Geo40) for the information of our shareholders.

It contains summary information about Geo40's recent activities, but is not a comprehensive review.

Geo40 has taken all reasonable care in preparing this quarterly update. In particular, any third party information has been taken from sources Geo40 reasonably believes to be reliable, and any forward-looking statements have been based on reasonable assumptions about future matters. However, Geo40 does not warrant the currency, accuracy, reliability or completeness of the summary information provided, nor guarantee the achievement of any forward-looking statements and forecasts.

You are welcome to share this update with your professional advisers and with interested third parties – and welcome, at any time, to contact Geo40 if you have questions about it. Please note, though, that the quarterly update is not an offer, invitation or recommendation to any person to subscribe for, buy or sell Geo40 shares, and does not set out all the information that a person should consider when deciding whether to invest in, buy or sell Geo40 shares. Accordingly, it should not be relied on by any person in making an investment decision.



## OPERATING PERFORMANCE

We continue to mature the operating performance of our Ohaaki, New Zealand, silica recovery assets. As the quarter commenced, we responded to a deterioration in silica recovery; a function of some of our filtration media reaching its scheduled three-year lifespan. With replacement media now installed, that issue has largely been corrected.

We continue to be challenged by the silica concentration in the geothermal fluid at Ohaaki. Through Q2 we saw this continue, affecting our production capacity. We are studying potential mitigants to this issue, however initial indications are that this position will be sustained for some time. We are also working to see if we can achieve agreement to defer or shorten the signalled six month outage of our small Ngawha Plant whilst trials at the geothermal field are undertaken by the generator, so we can use this production to help meet orders.

We will continue to do all we can to minimise manufacturing losses to maximise production. This is particularly important as our work to build silica markets comes to fruition, with current demand now exceeding our ability to supply. Current inventory is below-optimal at c.60 tonnes, which reduces our speed-to-market when orders are received.



## R+D – CONTINUING TO MAKE ADDED VALUE SILICA PRODUCTS AND ADVANCING OUR DIRECT LITHIUM RECOVERY TECHNOLOGY

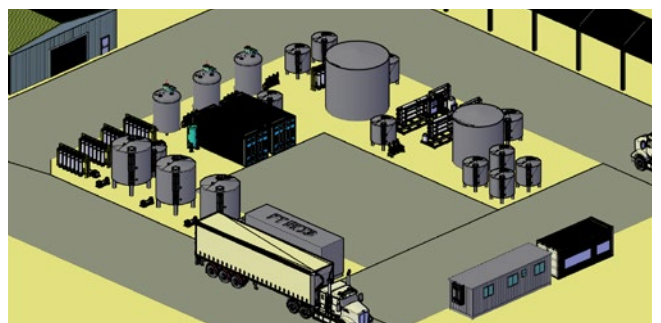
Investors will recall our focus on bedding-in the manufacture of a customised low-pH colloidal silica product for a major USA-based customer in the automotive catalyst sector. We continue to successfully manufacture and ship large volumes of this product each month, and we have been successful in keeping up with demand here.

While we have developed a product and formulation chemistry for the rubber sector, we continue to work towards the same for the paper industry. Colloidal silica can replace less-sustainable polymers and we see this as a compelling market opportunity. Initial technical work has proved successful and development is ongoing.

Our proposed lithium demonstration plant will likely feature a number of process innovations not present in our pilot plants, aimed at driving down the operational and capital costs of these assets. We are trialling these innovations at our New Zealand base at present.

Our focus on protecting our DLE technology via a suite of patents continues. One of our patents is now in the formal examination stage with a total of four patents lodged. We anticipate filing a further three patents by the end of August 2024.

We remain 100% committed to building and deploying a lithium demonstration plant to North America as quickly as we can. Design is well advanced and we will commence procurement of long lead items if Tembo and Vision Blue exercise their options. Our current strategy is to make this plant notionally mobile so it can potentially operate on more than one site. An early isometric of the design is included below.



*Isometric of proposed Lithium Demonstration Plant*



## DEPLOYING DLE IN NORTH AMERICA AND TARGETING A LICENSE MODEL IN SILICA

Investors will recall that we built two mobile testing rigs in North America to support our lithium field piloting work. We have now completed work on our first North American lithium site in the Permian Basin in Western Texas with a household-name oil and gas major. We processed three of their brines for a period of almost seven weeks. This basin typically features quite low lithium grades, so this was an exceptional opportunity both to work with a major player in the sector and to validate our hypothesis that our DLE technology can work on relatively low-grade lithium brines.

We are delighted to disclose below some initial testing results:

Measure	Initial Results	Notes
Pretreatment methodology	Successful pretreatment regime identified	Oil and gas brines require different pretreatment for DLE to succeed
Number of brines successfully processed	Three brines representing different pre-treatment approaches	We processed raw, treated and concentrated brines at this site
Process cycles	200 total cycles achieved	Minimum of 50 cycles on each of the three brines was completed
Lithium recovery achieved	Greater than 90% average	This is a measure of how much lithium was recovered from the brine

We have recently signed another agreement to permit piloting with a second large oil and gas company, this time on the Haynesville Shale formation in Louisiana. Lithium grades are higher here than in the Permian Basin, with our testing work to commence in early September. This site fits well with our strategic approach of targeting flowing oil and gas separation waters.

Our work to license our silica recovery technology continues. We can confirm that we are awaiting a decision in a tender process on one site for micro-piloting, and we are at handshake agreement stage on commercial terms for micro-piloting on two other sites. We are working to formally contract with these parties at present and hope to have definitive news on these opportunities in the near term.



## SALES AND MARKET DEVELOPMENT

Investors will note our best-ever quarter in silica sales in Q1 2024 with gross revenue of c.NZ\$1.1m. We followed this in Q2 2024 with a similar gross revenue result of \$0.94m, in line with budget. As we go to print, we anticipate exceeding this run-rate in Q3 2024. Putting together consecutive strong quarterly sales results is pleasing.

Regular monthly shipments of a speciality silica product to an important USA-based customer have played a key role overall here. While we encountered some complex technical issues last quarter these have now been resolved to the customer's satisfaction. Alongside this demand we are active in three other large market segments; precision investment casting, refractory and cementitious admixtures. We are actively managing key accounts whilst also working to strengthen demand across all four of these key categories.

Alongside these established markets, we have narrowed our current future-market focus to two potentially high-demand sectors; rubber and papermaking. Investors will recall that last quarter we shipped our first sea-container of silica to a rubber industry customer. Our second focus market is the use of colloidal silica in paper production. This is important as the sector volumes are very significant across Asia Pacific, where there appears to be genuine appetite to license our silica recovery technology. This sector is challenging but we have made good early progress.

We are also working to move customers to innovative bag-in-box packaging widely used in the beverage sector. Solutions like these reduce costs, increase our competitiveness and improve margins. We remain committed to certifying the low-carbon attributes of our full product range but have paused this work whilst the sector catches-up in fully valuing this collateral.





## FINANCIAL, SECRETARIAL AND THE FUTURE

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### Bedding-in silica sales and keeping up with demand

We continue to demonstrate that we can prevail in silica sales, with two strong consecutive quarters and a third well-advanced. This has put pressure upon production, particularly in the current environment of low silica concentration in the geothermal brine.

### Moving into the field in lithium

Our first North American piloting site is successfully behind us. We learnt a great deal whilst on site and we have now undertaken pilot modifications designed to enhance performance further on subsequent sites as we seek to compete with our strongest competitors. We continue to sign deals to permit piloting with major oil and gas companies, consistent with our broader strategy. We look forward to reporting upon our second site and to announcing our third site shortly.

### Capital and Equity Value Management and Strategy

We remain committed to deploying a lithium demonstration plant in North America as quickly as we can. Tembo Capital's 2023 and Vision Blue's 2024 investment deals each included options to invest further, designed to fund such a plant. We are working through conversion of these options with both of these parties, and as we hoped they are leveraging their networks to create opportunity for Geo40.

Design of this plant is well advanced and assuming Tembo and Vision Blue convert their options and invest further, we can move into procurement of long lead-time key hardware. We believe that demand for this asset will be significant, which will flow to the quality of opportunities available to us.

Our strategy to target oil and gas separation waters, and the major oil and gas players that control these brines, has proven

to be almost completely unaffected by the current low lithium pricing that has had a devastating effect upon lithium listed-company stocks this year. The oil and gas sector has redoubled efforts to pursue lithium-from-brine via DLE, to a large extent "recession-proofing" this part of the lithium sector. Geo40 provides some evidence of this, with a relatively long forward cash runway and investment options with major mining private equity investors that can take us forward in both asset deployment and working capital. While we have much more work to do, we are certainly in a relatively strong position as a function of this strategy.

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Getting beyond our first North American lithium piloting site is a significant milestone. Reflecting on our early results and positioning to perform even better on our second site demonstrates our resolve here. The lithium brine sector continues to heat up, and we're doing all we can to be optimally positioned to take advantage of the energy here.

We continue to progress steadily towards the licensing of our silica technology, with three near-term opportunities coming together nicely. Our work in penetrating silica markets is key to this broader strategy.

We are moving fast in targeting sub-sectors in both silica and lithium that genuinely desire our technologies, creating new potential optionality for the company in the months ahead.

As always, I thank you sincerely for your support and belief in us and I will keep you well informed as we advance.

Ngā mihi mahana.

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