

SUNRISE

RESOURCES plc

(“the Company”)

AIM Announcement

24 April 2019

PROJECT UPDATES

Sunrise Resources plc (ticker symbol 'SRES'), the AIM-traded company focusing on the development of its CS Pozzolan-Perlite Project in Nevada, USA, is pleased to provide the following project updates:

CS POZZOLAN-PERLITE PROJECT

- Latest testwork shows promise for production of premium-value super-coarse horticultural grades of perlite.
- Positive results from concrete trials by second large cement/ready-mix company using Company's natural pozzolan.
- Additional programme of bulk sampling completed:
 - 7-ton perlite sample submitted for crushing and screening to confirm mobile plant design.
 - 18-ton pozzolan sample sent to custom milling facility to provide information on grinding characteristics and to provide larger ground samples for additional customer trials.
 - 100-ton sample of perlite extracted for further processing and customer testing.
- Permitting:
 - Plan of Operation and Reclamation Permit Application for production of pozzolan and perlite to be submitted this month.
 - Emissions Inventory nearing completion for the Federal Environmental Assessment and State Air Quality Permit application.
 - Latest estimates suggest completion of permitting will be delayed slightly to 4th quarter of this year following procedural changes by the Regulator.
 - Suitable water source identified and Water Rights and development Rights of Way applications submitted.
- Market opportunities for natural pozzolan increasing as fly ash shortages continue. Closure of the Navajo Generating Station will take 500,000 tons/year of fly ash from the western US market.

NEWPERL PERLITE PROJECT (Nevada)

- Positive perlite expansion testwork completed on samples collected from NewPerl and Jackson Wash.
- Notice level permit application submitted for drilling and bulk sampling.

COUNTY LINE DIATOMITE PROJECT (Nevada)

- Approach from potential diatomite customer - Samples collected and submitted for manufacturing tests.
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Commenting today Sunrise Executive Chairman Patrick Cheetham said: *“I am pleased to provide this detailed update on our progress with permitting and market development testwork as we continue to prove the value of our natural pozzolan and perlite with future customers. Gaining market acceptance is a long process for industrial minerals such as perlite and pozzolan but I am pleased with our progress and market developments mean both products are increasingly in demand. I am also pleased to be reporting positive developments on our NewPerl Perlite and new interest in our County Line Diatomite Project.*

DETAILED INFORMATION

CS PROJECT - PERLITE

Testwork for production of premium grade, super-coarse horticultural perlite.

The Company has recently completed testwork aimed at the production and expansion of super-coarse horticultural grades of perlite from the Company's CS Pozzolan-Perlite Project.

These very coarse grades of raw perlite are only available in restricted tonnages and command a premium price.

This testwork has produced a coarse expanded perlite with acceptable yields indicating promising potential for the production of these premium grades of horticultural perlite.

Bulk Sampling

In order to provide potential customers with additional samples for testwork the Company has recently completed a second round of bulk sampling at the CS Project. One hundred tons of perlite has been extracted and will be sized and graded to customers' requirements.

The bulk sample mining exercise has confirmed that the perlite targeted for first production can be mined mechanically by excavator or by ripping using a bulldozer, i.e. without the need for more costly drilling and blasting.

Seven tons of the perlite bulk sample have been submitted to a process equipment supplier who has arranged trial crushing and screening through production scale mobile processing equipment to simulate the low capital cost processing option that is being planned for first production of perlite.

This work will provide additional information on the crushing and screening characteristics of the perlite and allow for refinement of the mobile process plant design and provide information on yields of horticultural grade perlite.

The screen sizes for this work have been selected to produce a super-coarse raw perlite and it is anticipated that sufficient material will be produced during this crushing and screening to provide samples for expansion testing in a commercial furnace.

CS PROJECT - NATURAL POZZOLAN

Further Concrete Tests

In the announcement of 21 February 2019, the Company advised the successful completion of the first concrete tests by a large cement and ready-mix company using the Company's natural pozzolan.

The Company has now completed a programme of testwork with a second major producer of cement and ready-mix concrete using the Company's natural pozzolan. The results are consistent with the results of the previously announced tests and compare favourably with concrete made using coal power station fly ash, currently the most commonly used form of supplementary cementitious material (SCM).

Commercial Scale Grinding

In order to meet customer demand for additional testwork samples of ground pozzolan the Company has arranged for 18 tons of the material remaining from the September 2018 bulk sample to be submitted to a commercial custom grinding facility.

The sample has been delivered and will be ground in the next few days. The grinding of this sample is expected to provide further information on grinding times and energy requirements for production of a finished natural pozzolan product.

This ground product will be supplied to a number of separate customers for evaluation.

Permitting

The Company continues to advance its permitting work for development of the CS Project.

The Company has completed an advanced draft of the Emissions Inventory for the project which is required for the Environmental Assessment by the main regulator, the Federal US Bureau of Land Management (BLM). An emissions inventory is also needed for the Air Quality Permit application which is submitted to the Nevada Division of Environmental Protection (NDEP). The BLM's inventory quantifies the maximum level of air pollutants from mining and mineral processing equipment as well as fugitive dust sources.

The Company expects to submit its draft Plan of Operations and Reclamation Permit as a joint application to the BLM and NDEP around the end of this month. The Plan of Operations is a key document and together with the completed baseline studies forms the basis for the preparation of various environmental reports to assess the Project's effects on current land use and the area's natural resources (air, water, animals etc.). All of these documents feed into the BLM's Environmental Assessment (EA) Process which is a requirement of the National Environmental Policy Act (NEPA). The EA Process together with the public commentary period and final regulatory approvals, is the final process in the permitting process with the BLM.

The Reclamation Permit application is evaluated by the Nevada Bureau of Mining Regulation and Reclamation, a part of the Nevada Division of Environmental Protection.

The Company is still expecting a relatively straightforward EA Process based on its environmental studies and mine and mineral processing plans. However, changes to the reporting procedural requirements under NEPA have resulted in a small shift in the projected timetable for completion of permitting which is now expected to occur later in the fourth quarter of this year.

Various additional minor permits are required, for example for the storage of LPG, any hazardous materials and explosives (if and when required) but the process of obtaining these permits is relatively short and can be accommodated within this overall timeframe.

Following the completion of permitting the project the Company is required to submit a reclamation bond before mining can start. The Company's Plan of Operations will be phased to minimise the amount of the initial bond.

Water Supply

Water will be required by the CS Project, primarily for dust suppression in and around the Company's proposed mining and mineral processing operations.

A disused well has been identified close to the proposed operations and has been pump tested and found sufficient to supply the Company's needs. An application has been submitted for water rights to be used in conjunction with the well and the Project.

Water rights in the basin in which the well and the Project are located exceed the annual recharge capacity of the basin so new rights can be hard to obtain. In the event that the Company's water rights application is not granted, the Company has a back-up plan to lease water rights from an existing holder for use in conjunction with the same well.

An application for a Right of Way for the well and access over BLM administered land has been completed and will be submitted alongside the Company's Plan of Operations and Reclamation Permit application.

Drone Survey

A drone photogrammetric survey has been commissioned to provide ultra-high-resolution ground imagery and a digital terrain model to control future mining operations.

General Market Update – Natural Pozzolan

The market opportunity for natural pozzolan is strongly linked to the reduction in the supply of the coal-fired power station fly ash, the residue from burning coal which has long been used as a cement replacement product (a supplementary cementitious material or SCM) in the production of concrete.

Fly ash and natural pozzolan SCMs both improve the long-term strength and resistance of concrete compared to concrete made using only Portland Cement. These performance characteristics have resulted in many State transport infrastructure regulators mandating the use of SCMs in concrete used in public works.

The shortage of fly ash in the USA is the direct result of the continuing closure of coal-fired power stations throughout the USA due to a lack of economic competitiveness with natural gas-fired power generation and a drive to greener power generation.

These macro-economic factors create a permissive environment for natural pozzolan and have recently been highlighted by two separate reports.

A report issued in March this year by Energy Innovation LLC¹ (The Coal Cost Crossover: Economic Viability Of Existing Coal Compared To New Local Wind And Solar Resources). reported that *"America has officially entered the **coal cost crossover**" – where existing coal is increasingly more expensive than cleaner alternatives. Today, local wind and solar could replace approximately 74 percent of the U.S. coal fleet at an immediate savings to customers. By 2025, this number grows to 86 percent."*

A report recently commissioned by the Sierra Club² and submitted to the California Legislature highlights the potential for SCMs such as natural pozzolan to replace cement in cement and concrete mixes and reduce the carbon outputs of the California Cement Industry.

"In addition, the CO₂ emissions intensity (tCO₂/t cement) of California's cement industry was the second highest among countries/regions studied, and 57 percent higher than that of China's cement industry."

In the Company's target markets, California and Nevada, the supply of fly ash is most acute owing to its distance from the sources of supply. This will get worse with the closure of the Navajo Generating Station, the largest US coal-fired power station west of the Mississippi. After unsuccessful efforts to keep this running, it will now close at the end of this year and consequently some 500,000 tons per year of fly ash will be taken off the market. Currently approximately 1 million tons per annum of SCMs are used in California.

NEWPERL

Perlite Testing

Further to the Company's announcement of 3 January 2019 the Company has now completed expansion testwork at In.mat-Lab in Greece on reconnaissance samples of perlite from the Jackson Wash and NewPerl claim areas.

This testwork has confirmed that large areas of perlite at both localities are suitable for the production of horticultural grade perlite. Three selected samples were submitted for production of super-coarse grades of perlite with promising results.

The Company has submitted a Notice level permit application to the BLM for a small drilling and bulk sampling programme on the Knoll Prospect of the NewPerl Project Area.

COUNTY LINE DIATOMITE DEPOSIT

Following an enquiry from a diatomite consumer looking for a new source of diatomite, a small sampling programme was carried out this month and samples sent to the consumer for testing.

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References:

1. The Coal Cost Crossover: Economic Viability Of Existing Coal Compared To New Local Wind And Solar Resources. Eric Gimon And Mike O'boyle, Energy Innovation & Christopher T.M. Clack And Sarah Mckee, Vibrant Clean Energy. March 2019.
https://energyinnovation.org/wp-content/uploads/2019/03/Coal-Cost-Crossover_Energy-Innovation_VCE_FINAL.pdf
2. Hasanbeigi, A. and Springer, C. 2019. California's Cement Industry: Failing the Climate Challenge. Global Efficiency Intelligence. San Francisco, CA.
<https://www.globalefficiencyintel.com/new-blog/2019/californias-cement-climate-challenge>

This announcement contains inside information for the purposes of Article 7 of EU Regulation 596/2014.

Further information

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Note:

- 1. The information in this release has been compiled and reviewed by Mr. Patrick Cheetham (MIMMM, MAusIMM) who is a qualified person for the purposes of the AIM Note for Mining and Oil & Gas Companies. Mr. Cheetham is a Member of the Institute of Materials, Minerals & Mining and a member of the Australasian Institute of Mining & Metallurgy.*
- 2. The news release may contain certain statements and expressions of belief, expectation or opinion which are forward-looking statements, and which relate, inter alia, to the Company's proposed strategy, plans and objectives or to the expectations or intentions of the Company's directors. Such forward-looking statements involve known and unknown risks, uncertainties and other important factors beyond the control of the Company that could cause the actual performance or achievements of the Company to be materially different from such forward-looking statements. Accordingly, you should not rely on any forward-looking statements and save as required by the AIM Rules for Companies or by law, the Company does not accept any obligation to disseminate any updates or revisions to such forward-looking statements.*

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