



# SUNRISE RESOURCES PLC

**AIM Announcement**

**15 August 2014**

## **SUNRISE RESOURCES PLC ("the Company")**

### **COUNTY LINE DIATOMITE PROJECT, USA**

### **FURTHER POSITIVE TESTWORK RESULTS**

Sunrise Resources plc, the AIM traded diversified mineral exploration and development company, is pleased to advise further positive results from sampling of the Company's 100% owned County Line Diatomite Project in Nevada, USA, which was acquired in February this year.

These latest test results follow the news release dated 12<sup>th</sup> May 2014 when results for a more geographically restricted composite sample were announced. The recent sampling programme was reported on 30 June 2014.

#### **HIGHLIGHTS:**

- **Test results received for 8 samples taken over a wide area of the project**  
**Tests comprised chemical analysis, size fraction analysis and scanning electron Microscopy**
- **Substantively consistent results obtained for all samples - comparable with those previously reported for a more geographically restricted sample**
- **Results support a large tonnage potential**
- **Drilling and/or trenching and further minerals processing testwork now justified**

**Commenting today, Executive Chairman Patrick Cheetham said:** "I am pleased to report that broader spaced sampling of the County Line Diatomite Deposit has shown it to be of a consistent quality over a large surface area with samples taken up to 2.5 km apart. We are moving quickly with our evaluation of this deposit as we see potential for a large resource of diatomite. Drilling and/or trenching is now justified to collect larger samples for further mineral process testwork to evaluate and optimise the application of this diatomite in various filler and filter applications."

## Further information

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### **DETAILED INFORMATION**

The County Line Diatomite Project comprises 61 claims over an area of 5 square kilometres, 200km southeast of the city of Reno, Nevada, USA.

#### **About Diatomite**

Diatomite is a valuable industrial raw material made up of hollow and lattice-like silica skeletons of single cell aquatic algae (diatoms). It has a high porosity and is suitable for use as a filtration medium in making beer, liquor, wine, fats, fruit juices and solvents. Commercial diatomite products have a high brightness, a low bulk density and chemical inertness which make them suitable as industrial fillers in paint and plastics and as a carrier material in various industrial, domestic and agricultural products.

Diatomite is produced and sold in three main product forms each requiring a different level of processing of the raw material. In all cases the raw material is first carefully desagglomerated and then size-classified to remove coarse impurities. The diatomite can be sold in this form as "Natural Diatomite" or it can be processed further by heating to high temperature (calcining) to adjust particle structure and increase particle size to produce "Calcined Diatomite". Often a flux (salt or soda ash) is added during the calcining stage to produce "Flux Calcined Diatomite".

#### **Test Results**

The test results now being reported are for 8 samples taken from widely spaced outcrops of diatomite throughout the County Line diatomite deposit. The testwork was carried out on behalf of the Company by specialist industrial minerals consulting company Dorfner ANZAPLAN in Germany.

Testing of the 8 samples included three key tests – chemical analysis, particle size analysis and scanning electron microscope ("SEM") evaluation of diatom morphologies. These three tests comprise a subset of the more extensive set of tests that were carried out on a more geographically restricted composite sample of County Line diatomite and which were reported to the market in detail on 12 May 2014. The three tests were chosen to evaluate the variability of some key characteristics of the deposit over the wider area recently sampled.

Prior to testing all samples were desagglomerated and screened to -63 microns to remove coarser sized mineral contaminants which occur typically in the +63 micron fraction. The yield of -63 micron material averaged 94% with only one sample showing significant variation.

## **Chemical Analysis**

Chemical analysis of the -63 micron samples was carried out by X-ray fluorescence. The results were generally favourable and closely comparable to those reported for the previously tested and reported composite sample and analyses available for commercially available Natural Diatomite products. Whilst some variability was noted, and is to be expected, the average values of key elements in the samples tested fall within acceptable limits. The results suggest that a selective and/or blended feed could achieve the required chemical specification for filtration grades – especially given the expectations of very low calcium and iron release indicated by the previously reported testwork.

## **Particle Size Analysis**

The results of size analysis of the -63 micron material showed the grain size distribution to be comparable or slightly finer than the previously tested composite sample. The significance of this is discussed further below.

## **Diatom Morphology**

SEM evaluation of all samples after desagglomeration indicate similar diatom morphologies to those in the previously tested composite with samples dominated by a limited number of intact cylindrical diatoms and a majority of broken diatom skeletons.

## **Conclusions**

The chemical analyses compare well with the previous composite sample and commercially available diatomite products. Such limited variability that exists within the chemical analysis does, however, suggest the opportunity for both selective mining and blending should this prove necessary.

The grain size is consistent with the fragmented character of the diatoms. This characteristic is similar to some commercial products used in the filler market. Whilst a larger percentage of intact diatoms might be ideal for the filtration market, diatomite products used in this application undergo significant calcination and flux calcination treatments to modify the characteristics of the raw material and these treatments require further testing on this new potential source of diatomite. The Company's previously reported initial tests aimed at the filter market were encouraging and considerably more testwork is required to determine the range of filler, filter or other products that can be produced.

The results demonstrate that the key characteristics investigated during the recent testwork and previously reported for a more geographically restricted sample of the County Line Diatomite prevail over a wide area with the latest 8 samples taken from widespread locations as much as 2.5 km apart on the licence area.

The County Line diatomite outcrops semi-continuously between the samples and in some of the areas sampled several metres of vertical thickness is exposed. Overburden is absent over much of the deposit other than for a thin development of soil. Whilst there is currently no code-compliant Mineral Resource defined for the project, the current exposures of the diatomite suggest that a large resource could be defined by shallow drilling and/or trenching.

## **Ends**

*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 dated June 2009. Mr Cheetham is a Member of the Institute of Materials, Minerals & Mining and also a member of the Australasian Institute of Mining & Metallurgy.*

## **About Sunrise Resources plc**

Sunrise Resources plc is a diversified mineral exploration and development company. The Company has diamond exploration interests in Western Australia and Finland and holds a white barite project in South-West Ireland.

The Company has two gold exploration projects in Western Australia and has an active project programme to generate new exploration projects in Australia and Nevada, USA.

It has recently staked claims over the Strike Copper Project, the County Line Diatomite Project and the Garfield Gold-Silver-Copper Project in Nevada, USA.

Shares in the Company trade on AIM. EPIC: "SRES" [www.sunriseresourcesplc.com](http://www.sunriseresourcesplc.com)