ASX Release
20 March 2024

DATELINE RESOURCES LIMITED

(ACN 149 105 653)
ASX Code: DTR

CAPITAL STRUCTURE
Share Price (19/03/24) $0.016
Shares on issue 1.45 billion
Market Cap $23.24 million

MAJOR SHAREHOLDERS

Mr. Mark Johnson AO	20.18%
Mr. Stephen Baghdadi	13.70%
Southern Cross Exploration N.L	6.60%
National Nominees	5.53%

DIRECTORS & MANAGEMENT

Mark Johnson AO
Chairman

Stephen Baghdadi
Managing Director

Greg Hall
Non-Executive Director

Tony Ferguson
Non-Executive Director

Bill Lannen
Non-Executive Director

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DATELINE RESOURCES

USGS confirm Mountain Pass and Colosseum zircons are "indistinguishable".

Highlights

- **USGS has undertaken zircon aging analysis for Colosseum and Mountain Pass**
- **The REE concentrations and chondrite-normalised spectra for the "Colosseum zircons are indistinguishable from the Mountain Pass zircons".**
- **The error-weighted mean age for the Colosseum zircons is 1,453±44Ma compared to Mountain Pass (ca 1,390-1,440Ma), demonstrating overlap.**
- **The Colosseum zircons have much lower U and Th (~20-50 ppm each) than Mountain Pass zircons (~100-800 ppm U, ~100-1,400 ppm Th)**

Dateline Resources Limited (**Dateline** or **the Company**) is pleased to provide an update to rare earth studies being undertaken at the Colosseum Project in California. The studies follow on from previous mapping and sampling studies by the Company's rare earth experts,Anthony Mariano PhD and Tony Mariano Jnr[1] (Marianos) as well as geophysical modelling undertaken in late 2023[2].

In October 2022, geologists from the United States Geologial Survey (**USGS**) and Dateline's own REE specialist Mr. Tony Mariano, visited Colosseum and collected samples, including those from a shonkinite dyke within the Colosseum mine area.

The USGS (United States Geological Survey) is a science bureau within the United States Department of the Interior with a budget of US$1.8 billion for 2024.

Samples from previously identified outcrops of fenitized dikes were collected by USGS geologists for further analysis.

Using the available zircons in the samples collected, age dating was performed to obtain geochronological data. Using a SHRIMP-RG ion microprobe[3], the USGS researchers concluded that REE concentrations and chondrite-normalised spectra for the **Colosseum zircons are indistinguishable from the Mountain Pass Rare Earth mine zircons** located 10km from Colosseum. This concurs with findings from the Marianos that the outcrops are genetically related and from the same period.

Commenting on the study, Managing Director, Stephen Baghdadi, stated:

"The study by the USGS continues to add weight to the evidence that Colosseum has the potential to host a significant rare earth system with low uranium and thorium content. We have the right geology, the right timing and are in a known and proven rare earth district."

"Whilst Dateline could have undertaken the age dating work on its own, its reassuring to have these results come from an independent US Federal agency."

"The immediate focus is on drilling the gold deposit at Colosseum ahead of mine planning for underground mining and a mineral resource update, however we continue to progress planning and studies on the rare earth potential."

[1] ASX Announcement 3 August 2022 – Colosseum rare earths field investigations
[2] ASX Announcement 20 October 2023 – Colosseum Rare Earths – Reprocessed data identifies several continuous high-density drill targets
[3] Geological Society of America Abstracts with Programs, Vol 56, No. 4 2024

Figure 1: Colosseum open pits. Red dots are the location of the identified fenite samples collected for analysis.

As reported in ASX announcement on February 13, 2024, in addition to the **70.1metres @ 6.53g/t Au** intersected within the breccia pipe, the company intersected **1.5 metres @ 31.3g/t Au** in the granite near the end of drill hole CM23-14.

Geochemistry study[4] of all the samples from drill hole CM23-14 was undertaken in an effort to determine if there are pathfinder elements that could be used to better target drilling for gold. The outcome of the geochemistry study was succesful and was reported on March 12, 2024. The geochemsitry analysis did not include the full suite of REE elements, however the geochemistry study of hole CM23-14 highlighted that there were elevated REE elements associated with the granite intersected near the end of the drill hole.

The following table shows the totals for the REE elements that were analysed, within the gold bearing breccia pipe, and separately within the granites at the end of drill hole CM23-14. Further analysis, including analysis for additional rare earth elements will be undertaken over the coming weeks.

Description	Cerium (PPM)	Lanthanum (PPM)	Yttrium (PPM)	Total (PPM)
In Breccia Pipe	47.77	22.45	15.57	85.79
In Granite	320.8	154.75	21.96	497.51
% Increase	671.58%	689.17%	141.02%	579.88%

[4] ASX Announcement 12 March 2024 – Gold drilling program expanded at Colosseum with second drill rig

USGS Abstract Summary – Technical Findings

Zircon Geochronology and Geochemistry Insights into A Shonkinite Dyke in the Colosseum Mine Area, Southeastern Mojave Desert, Ca

Geological Society of America Abstracts with Programs. Vol. 56, No. 4, 2024. doi: 10.1130/abs/2024CD-399680

Colosseum contains gold deposits hosted in Cretaceous rhyolite breccia pipes, which are much younger than the Mesoproterozoic (ca. 1.4 Ga) alkaline and carbonatite intrusions at the Mountain Pass REE mine.

Shonkinite dykes at Colosseum are mostly aphyric, but analysis of zircon from one sparsely porphyritic dyke enables a preliminary comparison to Mountain Pass zircons. High-spatial resolution (25 micron spot size) zircon data were collected with a SHRIMP-RG ion microprobe.

Due to the very low uranium concentrations (20-45 ppm), zircon U-Pb ages have relatively large errors. Based on 11 concordant analyses and excluding 14 other analyses based on discordance or very high (>100 Myr) single spot age errors, the error-weighted mean $^{207}Pb/^{206}Pb$ age is 1,453 ± 44 Ma.

Within error, these ages overlap the older end of the known age range of zircons from the Mountain Pass mafic alkaline intrusions (ca. 1,390-1,440 Ma).

Three concordant, inherited Paleoproterozoic zircons were also documented in the Colosseum sample, with $^{207}Pb/^{206}Pb$ ages of 1,623 ± 18 Ma, 1,643 ± 29 Ma, and 1,773 ± 30 Ma.

The inherited Paleoproterozoic zircons have much higher U (190-470 ppm), and a distinctly negative Eu anomaly in their chondrite-normalized REE spectra (0.1-0.3 ppm Eu), which is lacking in the primary Colosseum zircons (0.9-2.6 ppm Eu).

The REE concentrations and chondrite-normalized spectra for the Colosseum zircons are indistinguishable from the Mountain Pass zircons; however, the Colosseum zircons have much lower U and Th (~20-50 ppm each) than Mountain Pass zircons (~100-800 ppm U, ~100-1,400 ppm Th).

This announcement has been authorised for release on ASX by the Company's Board of Directors.

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About Dateline Resources Limited

Dateline Resources Limited (ASX: DTR) is an Australian publicly listed company focused on mining and exploration in North America. The Company owns 100% of the Colosseum Gold-REE Project in California.

The Colosseum Gold Mine is located in the Walker Lane Trend in East San Bernardino County, California. On July 6, 2022, the Company announced to the ASX that the Colosseum Gold mine has a JORC-2012 compliant Mineral Resource estimate of 20.9Mt @ 1.2g/t Au for 813,000oz. Of the total Mineral Resource, 258koz @ 1.2g/t Au (32%) are classified as Measured, 322koz @ 1.2g/t Au (39%) as Indicated and 235koz @ 1.3g/t Au (29%) as Inferred.

The Colosseum is located less than 10km north of the Mountain Rare Earth mine. Work has commenced on identifying the source of the mantle derived rocks that are associated with carbonatites and are located at Colosseum.

Forward-Looking Statements

This announcement may contain “forward-looking statements” concerning Dateline Resources that are subject to risks and uncertainties. Generally, the words “will”, “may”, “should”, “continue”, “believes”, “expects”, “intends”, “anticipates” or similar expressions identify forward-looking statements. These forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those expressed in the forward-looking statements. Many of these risks and uncertainties relate to factors that are beyond Dateline Resources’ ability to control or estimate precisely, such as future market conditions, changes in regulatory environment and the behaviour of other market participants. Dateline Resources cannot give any assurance that such forward-looking statements will prove to have been correct. The reader is cautioned not to place undue reliance on these forward-looking statements. Dateline Resources assumes no obligation and does not undertake any obligation to update or revise publicly any of the forward-looking statements set out herein, whether as a result of new information, future events or otherwise, except to the extent legally required.

Competent Person Statement

Sample preparation and any exploration information in this announcement is based upon work reviewed by Mr Greg Hall who is a Chartered Professional of the Australasian Institute of Mining and Metallurgy (CP-IMM). Mr Hall has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to quality as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves" (JORC Code). Mr Hall is a Non-Executive Director of Dateline Resources Limited and consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

JORC Code, 2012 Edition – Table 1 report template

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• As of 09/03/2024 the Colosseum Mine, Colosseum Rare Metals, INC. has completed 712 metres of drilling in 3 drill holes from 2024. All of the drilling was done from surface with a diamond drill core. Industry standard core handling and sampling procedures were employed to ensure high quality samples. • Core sample boundaries were defined by changes in lithology, alteration, and mineralisation noted in logging. • Collar to toe assays were taken and sent to labs for analysis. • Core was cut along the long axis leaving half for assay and half to be stored in cardboard core boxes. • Samples from drill holes were sent to ALS Global and Paragon Geochemical in Reno, Nevada for sample preparation and assay. Samples were dried, weighed, crushed and split to obtain 250 gm. Samples were placed in ring and puck grinder to produce 85% minus 75-micron pulp. This material was blended on clean cloth and packaged in paper pulp bags. Using a pulp balance, a 30-gm sample was weighted out for traditional fire assay. Samples were analyzed using standard fire assay for gold. Over limits were analyzed via gravimetric analysis. • All samples followed a strict Chain of Custody. • Routine QAQC samples were inserted in the sample runs at a rate of 20%, comprising Certified Reference Materials from CDN Resource Laboratories Ltd., and verified blank granitic material. • Surface sampling of dump material was taken at random surrounding the Colosseum pits to test approximate grades of dumps. • Sampling practice is appropriate to the geology and mineralisation of the deposit and complies with industry best practice.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• The drilling program utilizes surface core drilling. • The core drilling is being conducted with an Discovery drill rig with HQTT core tooling. Triple tubes were used for the for all holes to increase recoveries. The drilling has been completed by an experienced diamond drilling core driller.

Criteria	JORC Code explanation	Commentary
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• All drilling recoveries have been logged and notated each run based on 3.05-meter tooling. • To maximize sample recoveries, use of triple tube and long chain polymer muds were used to increase recovery. • There has been no analysis between sample recoveries and grade to date.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Core samples were geologically logged. Lithology, veining, alteration, mineralisation, and weathering are recorded in the appropriate tables of the drill hole database. • Each core box was photographed dry and wet, after logging of unit and structures were notated on the core. • Core was cut along the long axis using a diamond saw, half-core was sampled, and half stored for reference. • Geological logging of core samples is qualitative and quantitative in nature.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• All drill core samples were cut along the long axis. The left side when looking down hole was sampled. Samples were placed in a heavy-duty poly sample bag. Each core sample placed in heavy duty poly sample bag, noted interval width in sample book, with a sample tag with the corresponding sample number placed in the bag with the other tag stapled to the top of the bag. Sample bags were stapled along the top. Samples were sent by freight to ALS Global, or Paragon Geochemical in Reno, Nevada. • Routine QAQC samples were inserted at a 20% rate into the sample batches and comprised Certified Reference Materials (CRMs) from CDN Resource Laboratories Ltd. and verified blank granitic material. • Rock samples sent to ALS Laboratories and Paragon Geochemical were dried, weighed, crushed, and split, with a split pulverized to better than 85% passing 75 microns. Samples were analyzed for trace elements using 4-acid digestion. Additionally, rocks samples were analyzed by standard 30gm fire assay for gold and silver. • Rock samples collected by the USGS were analysed at the USGS laboratories in accordance with accepted industry best standards. • Sample size assessment was not conducted but used sampling size which is typical for gold deposits.

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Samples were assayed by industry standard methods by ALS Global Laboratories, and Paragon Geochemical, in Reno, Nevada. • Fire assays for gold were completed using industry standard fire assay methodology. • External certified standards and blank material were added to the sample submission. • Rock samples collected by the USGS were analysed at the USGS laboratories in accordance with accepted industry best standards.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Sampling, documentation, and sample submittal were under the guidance and care of Graham Craig, GIT (Association of Professional Engineers and Geoscientists of Manitoba). • Drilling, sample, and assay data is currently stored in MX Deposit, a secured data management system through Seequent. • Intercept lengths and grades calculated using approximately 1 g/t Au as the cutoff. • Rock samples collected by the USGS was in the presence of experienced USGS geologists and Consulting Mineral Exploration geologist, Anthony Mariano
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• All drill hole collars are surveyed using differential GPS survey equipment. The positions are accurate to within 10 cm x-y and height (z) to +/- 20 cm. • The holes are surveyed in UTM WGS 84 coordinate system. • Down hole surveys will be done using a Reflex EZ-TRAC magnetic downhole survey tool on all diamond drill holes. With collars surveyed using Reflex TN-14 Azi-Aligner. • Sample locations were surveyed using UTM WGS 84 coordinate system. • All samples collected by the USGS were located using GPS equipment
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• The spacing and location of data is currently 5-15 meter spacing according to previous Mineral Resource estimation completed by Barbara Carroll, CPG (American Institute of Professional Geologists) of GeoGRAFX Consulting, LLC. • No sample compositing has been applied at this time.

Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Drill holes are planned to be drilled along strike due to limited areas available to drill from. Definition of structure location is the principal goal. • Sample orientation is deemed to be representative for reporting purposes. • No bias is considered to have been introduced by the existing sampling orientation.
Sample security	• *The measures taken to ensure sample security.*	• All samples were taken and maintained under the constant care of Colosseum Rare Metals, INC. personnel or United States Geological Survey (USGS) employees. Samples were delivered to laboratories by a licensed transportation company or transported by USGS employees for analysis by USGS laboratory staff.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Drill hole sampling techniques and QAQC procedures have been developed and reviewed by Dale Sketchley, M.Sc., P. Geo. of Acuity Geoscience Ltd., Graham Craig, GIT. • The QAQC program has demonstrated its ability to catch errors. • A QAQC review will be completed for this program. • Mineral resource estimations and JORC 2022 completed by Barbara Carroll, CPG.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Colosseum Mine project is located in T17N R13E Sec 10, 11, 14, 15, 22, 23 SB&M. • All tenements are 100% owned by Dateline Resources Limited or a wholly owned subsidiary and there exist production-based royalties as previously disclosed to ASX.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Historical work has been completed by various mining companies since 1972. Draco Mines (1972-1974) Placer Amex (1975-1976) Draco Mines (1980) Amselco (1982-1984 Dallhold Resources/Bond Gold (1986-1989 Lac Minerals (1989-1994) • All the companies were reputable, well-known mining/exploration companies that followed the accepted industry standard protocols of the time. • Review of this work was completed by GeoGRAFX Consulting, LLC in 2022. • All previous work undertaken by others is non-JORC compliant. • The USGS collected samples for age dating analysis as disclosed in the body of this ASX release
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Colosseum mine is hosted by Cretaceous aged breccia-pipe. The pipe contains aphanitic Cretaceous rhyolite flows, Pre-Cambrian granitic basement material, and Cambrian-Devonian dolomite clasts replaced by sulphide mineralisation. • The gold mineralisation occurs in brecciated felsite and sediment clast replaced by sulphides. • The Argos mine is a flat, shallow-dipping sedimentary strontium deposit hosted in celestite. The celestite bed is overlain by various surface sediments with volcanics, primarily mafic volcanics, on the footwall. The mine was previously trenched along two trenches running approximately east to west at 1-3 metres in depth. There was one underground access mined historically that accessed from within the celestite layer to approximately 12 metres deep with limited east/west development at the bottom.

Criteria	JORC Code explanation	Commentary
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material, and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• See Table 1 within this report for details of the drill holes and sample locations.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Drill hole intersections are reported above a lower exploration cut-off grade of 0.1 g/T Au and no upper cut off grade has been applied.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• Drill holes are orientated along apparent strike of the breccia pipe due to limited drill pad locations. • Interception angles of the mineralised structures are estimated using core drilling intercepts and existing 3D models of the pipe orientation.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Supporting figures have been included within the body of this release.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced avoiding misleading reporting of Exploration Results.*	• Representative reporting of both low and high grades and/or widths have been reported.

Criteria	JORC Code explanation	Commentary
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• At Colosseum, future work will include expanded drilling between the North and South pits, mapping, and sampling of open pit benches; as well as infill and expanded surface soil geochemistry, geological mapping, and geophysics.