Soils define new targets: program over entire Hog Ranch begins

Rex Minerals Ltd (Rex or the Company) has received assay results from trial soil surveys (soils) completed at the Company's 100%-owned Hog Ranch Gold Property in Nevada, USA.

Highlights

- **Trial soils at Airport and Bells show strong association with gold in drilling and define new target positions**

- **Pathfinder elements also show excellent potential to find gold underneath shallow cover rocks**

- **The Company is now confident that soils can assist in the targeting of large-scale gold mineralisation at Hog Ranch**

- **A large-scale soils program is underway for over 79km² (~7,900 samples) at Hog Ranch.**
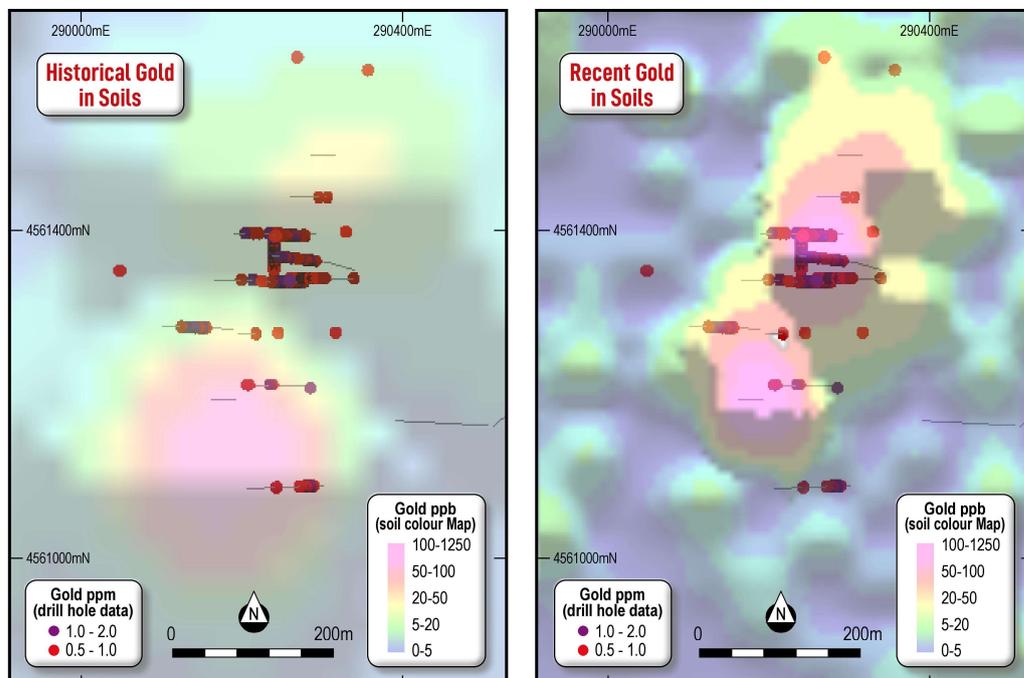

Figure 1: Historical gold in soils (left) relative to new gold in soils (right) shown over the assay results in drilling information exceeding 0.5g/t gold from the Airport Project area.

Rex Minerals' CEO and Managing Director, Richard Laufmann, said: "The new soils, compared to the poor historical data, are showing a much closer link to our gold intercepts from drilling.

"The gold endowment we know today for Hog of over 2.2Mozs of gold, looks like the footprint to a much larger system. We have high expectations that the soils can help unlock the bigger picture at Hog Ranch."

Soil sampling results (*Figures 1 and 3*) have been received from both the Airport and Bells Project locations (*Figure 2*) at Hog Ranch. Both trial soil surveys were completed at a 50m x 50m spaced grid to provide for a much higher level of resolution of the gold and gold pathfinder elements when compared to the historical soil sampling information.

This trial soil sampling information was completed as a test of the two most common geological environments which occur at Hog Ranch (see *Figure 2*), which are:

- Areas of outcropping felsic host rocks at the Bells Project area, and
- Areas of shallow cover rocks towards the centre of the Hog Ranch caldera at the Airport Project area.

Historical soil sampling information at Hog Ranch has occurred over multiple phases, using different sampling and assaying techniques and at an irregular grid – all of which has been found to be inadequate for the effective drill targeting of the gold mineralisation at Hog Ranch.

In contrast to the historical soil dataset, this new trial dataset has shown that soil sampling can provide for a relatively accurate view of the gold which has also been defined by the drill hole data. Rex now has confidence that a large regional dataset could greatly assist with the discovery of new, large-scale gold mineralisation at Hog Ranch.
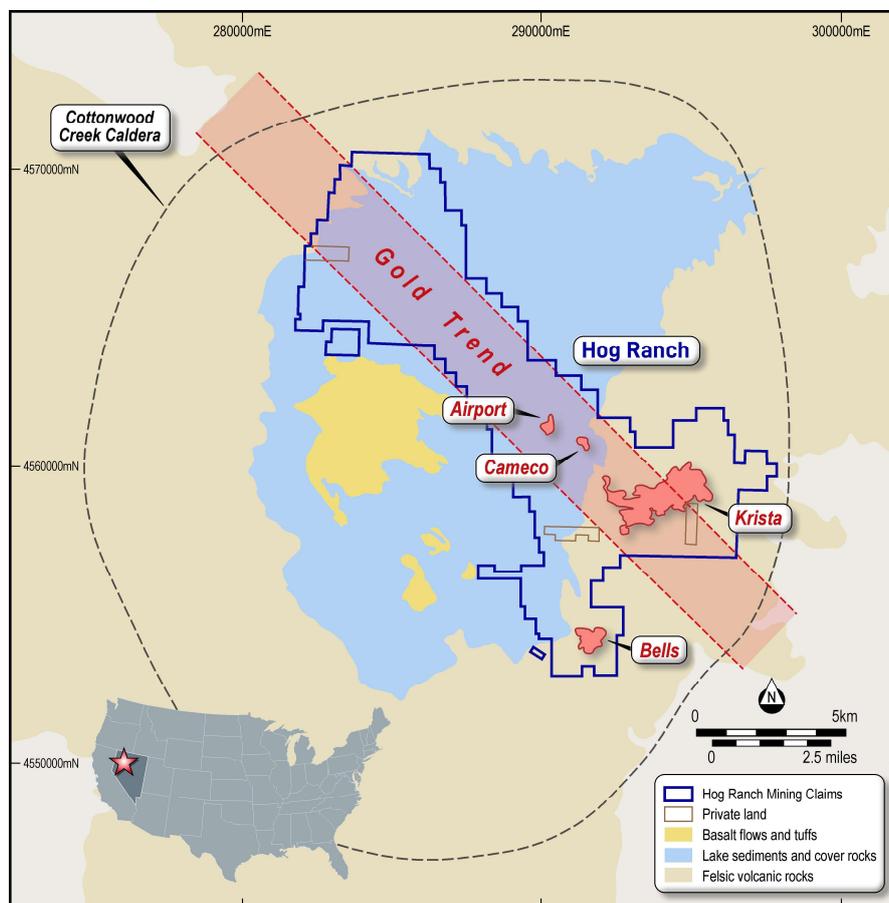

Figure 2: *Location diagram of the Airport and Bells Project areas within the broader Hog Ranch Property in north-west Nevada.*

Airport Soil Sampling Results - Background

In late 2021, Rex made some new discoveries from RC drilling at the Airport Project area. This was based on targeting from 3D IP information (see Rex announcement dated 27 August 2021). These results were found to be close to the surface but did not match very well the historical gold in soils or other pathfinder elements which are commonly associated with gold in epithermal environments such as Hog Ranch.

Based upon the above, Rex concluded that a new higher resolution soil survey over a regular grid pattern at Airport may provide for a better association between the gold in drilling relative to the gold and other pathfinder elements on the surface.

The results from this test work proved to be very effective in highlighting the close link between the known gold in drill hole data relative to the gold in the soil sampling information (*Figure 1*). It was also shown that the common pathfinder elements in most cases can highlight the position of gold mineralisation which may exist at deeper levels, where there is no evidence of gold on the surface (*Figure 3*).
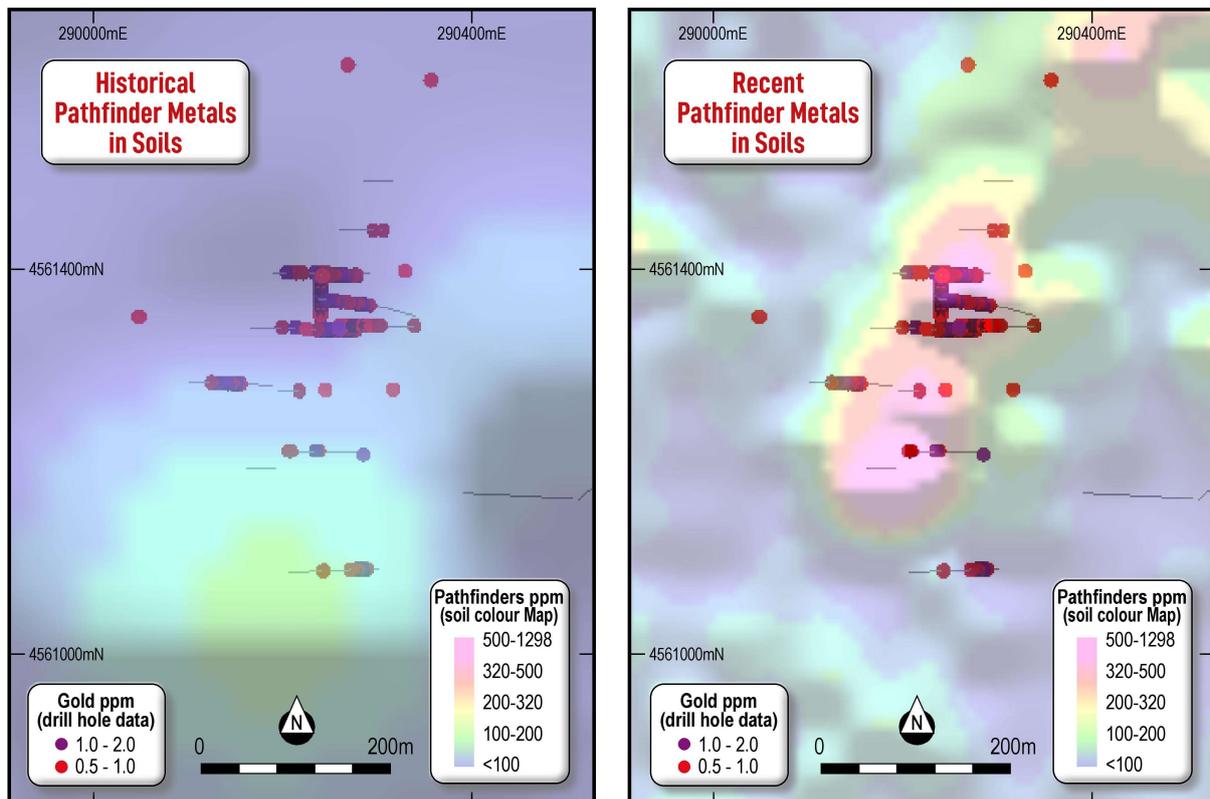

Figure 3: Historical pathfinder elements (As) in soils (left) relative to new results in soils (right) shown over the assay results in drilling information exceeding 0.5g/t gold from the Airport Project area.

Rex now has a combined dataset at the Airport area of airborne magnetics, airborne hyperspectral data, a 3D IP geophysical survey and the new soil sampling dataset, all of which point to a series of gold bearing north-north-east striking faults which appear to be the key controlling conduits to the higher-grade gold mineralisation at Airport.

The structures inferred from the airborne magnetic dataset at Airport and the surrounding area appear to extend for a great distance beyond the current drilling information. It is anticipated that the gold and gold pathfinder elements in soils could show where these large-scale structures host further gold mineralisation either close to the surface or underneath shallow cover rocks.

Bells Soil Sampling Results - Background

Rex has an extensive historical drill hole database, followed by a number of well-spaced recent drilling information leading to the current Mineral Resource at Bells of 560kozs gold (see Rex announcement dated 23 March 2021). Beyond the current Mineral Resource at Bells, some new airborne magnetic data and airborne hyperspectral data indicate that the surface area of the gold mineralisation at Bells may well exceed the currently defined Mineral Resource.

To test the possible effectiveness of soil sampling at Bells, a new survey was undertaken at a 50m x 50m grid over a 4km^2 area to cover both the Mineral Resource and the additional anomalism which was first identified from the airborne hyperspectral survey.

Similar to the results from the Airport soil sampling, both the gold and pathfinder elements at Bells, closely match the higher-grade gold in drilling results (see *Figures 4 and 5*). In addition, the further potential, as defined from the hyperspectral survey, was found to have significant anomalism in the pathfinder elements, but lower levels of gold mineralisation (*Figure 4*). Rex interprets these results to indicate that the gold mineralisation at this location potentially exists at deeper levels, below the immediate surface environment.
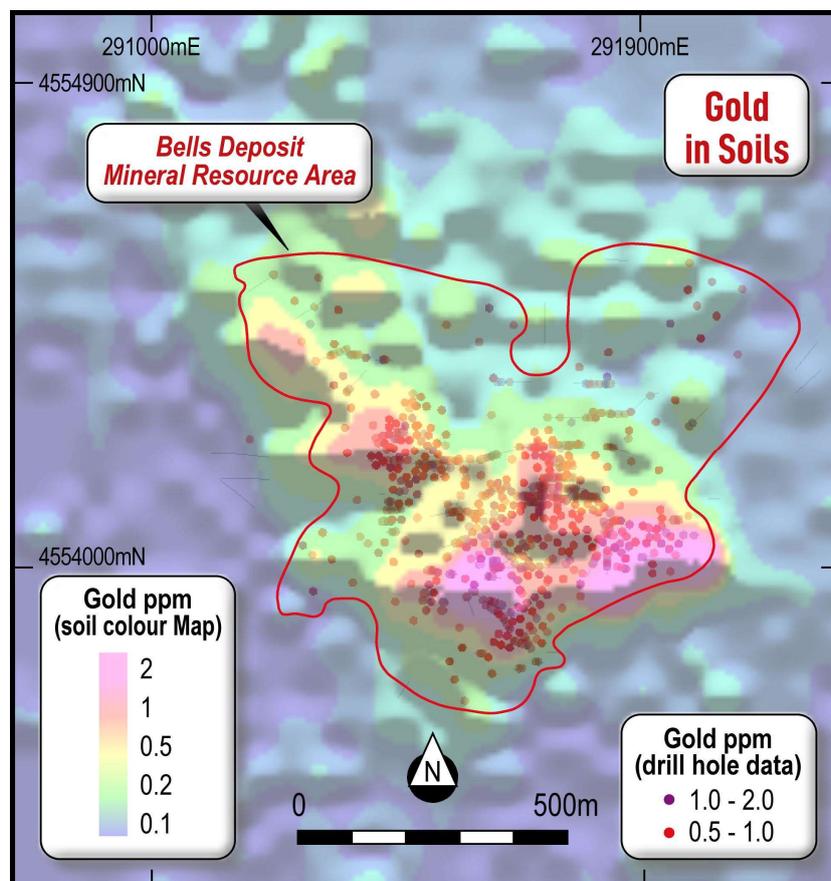

Figure 4: *Plan view of new gold in soils results shown over the assay results in drilling information exceeding 0.5g/t gold from the Bells Project area.*

The results from the soils sampling at Bells have given Rex confidence that the large area of outcropping host rocks, which include the much larger Krista Project area (with a surface area exceeding 20km²) could benefit greatly from a new soil sampling program.
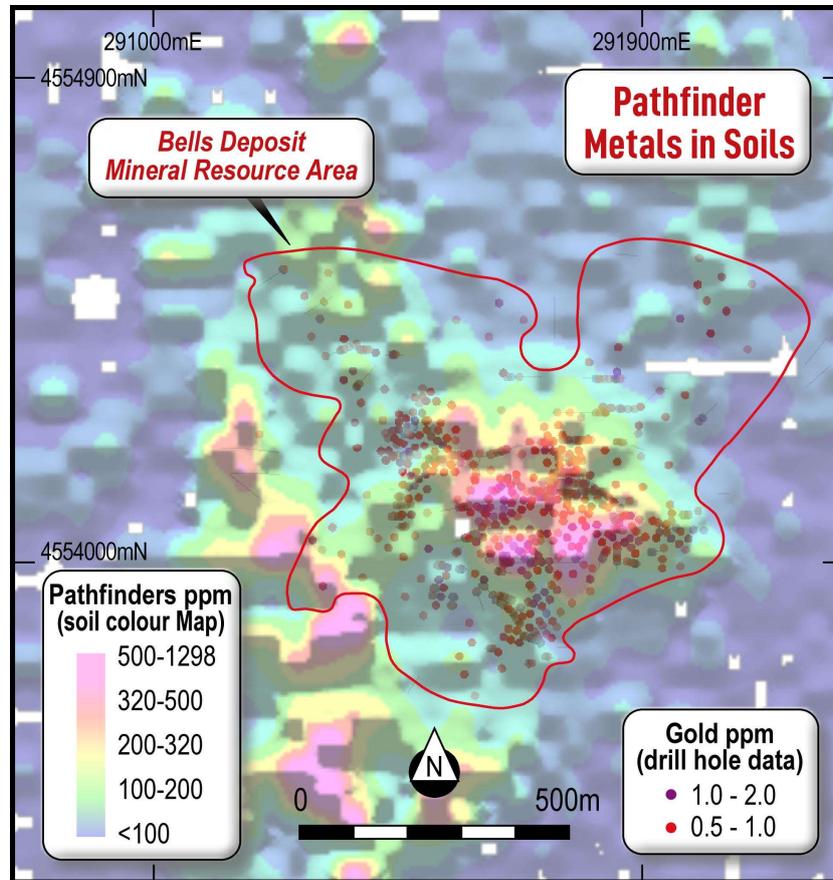

Figure 5: Plan view of new pathfinder elements (As) in soils shown over the assay results in drilling information exceeding 0.5g/t gold from the Bells Project area.

Next Steps for Hog Ranch

Rex has now commenced a large-scale soil sampling campaign at Hog Ranch which will extend over the bulk of the Mining Claim area for approximately 79km². A total of just over 7,900 samples will be undertaken in the first phase based on a 100m x 100m grid pattern, which will be followed up at a later stage with 50m x 50m sample spacing for the broad locations which show significant gold and/or pathfinder element anomalism identified from the current survey. The first round of results from the new regional soils surveys are anticipated in the coming months.

This announcement has been authorised for release by the Company's Chief Executive Officer.

For more information about the Company and its projects, please visit our website https://www.rexminerals.com.au/ or contact:

Peter Bird
EGM Investor Relations
T   1300 822 161 or +61 3 9068 3077
M   +61 438 871 995
E   'rex@rexminerals.com.au'

Media and Investor Relations:
Gavan Collery
T   1300 822 161 or +61 3 9068 3077
M   +61 419 372 210
E   'gcollery@rexminerals.com.au'

COMPETENT PERSON'S STATEMENT

The information in this announcement for the Hog Ranch Property that relates to Exploration Results, Exploration Targets or Mineral Resources is based on, and fairly reflects, information compiled by Mr Steven Olsen who is a Member of the Australasian Institute of Mining and Metallurgy and an employee of Rex Minerals Ltd. Mr Olsen has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Olsen consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Forward-Looking Statements

This announcement contains "forward-looking statements". All statements other than those of historical facts included in this announcement are forward-looking statements. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, forward-looking statements are subject to risks, uncertainties and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Such risks include, but are not limited to, gold and other metals price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks and governmental regulation and judicial outcomes. The Company does not undertake any obligation to release publicly any revisions to any "forward-looking statement".
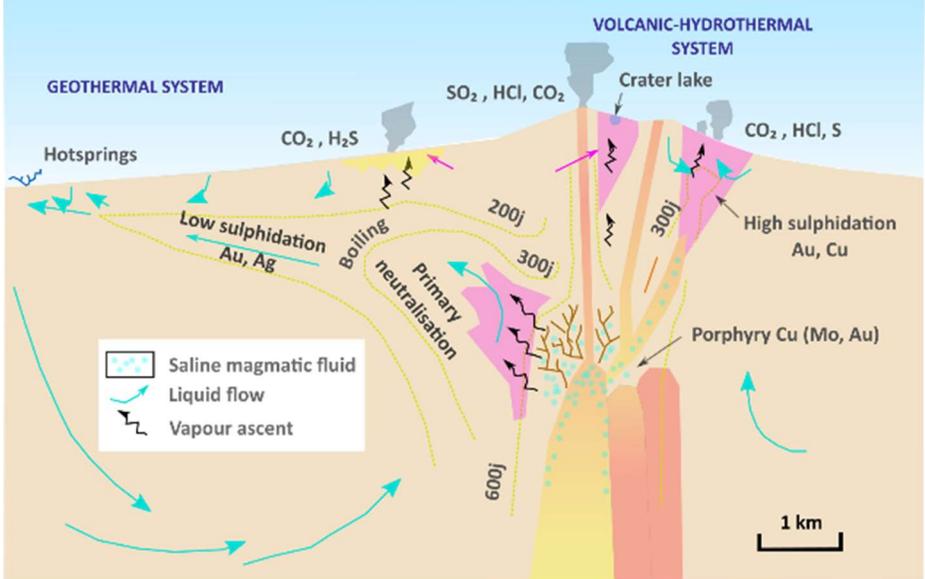
JORC Code, 2012 Edition – Table 1 Report

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	Soil samples of up to 1kg in total weight were taken at approximately 10 to 20 cm below the surface and sieved in the field to 10 mesh (2mm) and placed in a pre-numbered sample bag.
Drilling techniques	Not Applicable, No drilling conducted.
Drill sample recovery	Not Applicable, No drilling conducted.
Logging	Not Applicable, No drilling conducted.
Sub-sampling techniques and sample preparation	Samples were placed directly into a pre-numbered plastic bag at the site location. The samples were allowed to dry and sieved further down to 80mesh prior to analysing via portable XRF (pXRF; Olympus Innov-X, Delta DP4000) for various multi-elements (including gold pathfinder elements). pXRF readings were taken on the sieved sample and subsequently submitted to American Assay Labs (AAL) in Reno, Nevada, USA.
Quality of assay data and laboratory tests	The gold assay information was completed by AAL. AAL is accredited by the Standards Council of Canada (SCC) for specific tests listed in their Scope of Accreditation to ISO/IEC 17025:2017.
	The analysis used for all the reported gold assays was fire assay with an ICP-OES finish. Over range gold assays (>10g/t) were also analysed by Gravimetric (Weighted) finish.
	AAL routinely includes its own CRM's, blanks and duplicates within each batch of samples. In addition, Rex inserted a large number of its own QA/QC check samples within each batch of samples.
	Gold pathfinder elements which include results for As, Hg, Sb, Cu, Co, Zn and Pb were analysed for all samples using a portable handheld XRF machine (Olympus Innov-X, Delta DP4000) The readings from the pXRF data were taken against the screened soil samples over a minimum time of 2 minutes and 30 seconds per analysis, and 2 minutes per analysis for the standard and blank. The XRF machine was regularly checked against a reference soil standard (NIST 2711A standard) and a quartz puck for ongoing accuracy of the readings within the specified levels of accuracy.

Criteria	Commentary
Verification of sampling and assaying	The associated QA/QC samples included an external series of unrecognisable blanks that are inserted at the start and end of each batch of samples, in addition to internal laboratory check standards of varying gold assay ranges. No issues were identified based on an analysis of the soil sampling results.

The XRF data was checked against a number of laboratory analysis results for 2 lines of soils at both the Bells and Airport Projects. The laboratory analysis was completed at AAL in Reno, Nevada using their 43-element ICP analysis. No significant discrepancies were identified that are considered to be outside of the specified levels of accuracy for the hand held XRF. |
Location of data points	The sample location co-ordinates are recorded in UTM NAD83 (Zone 11N) within the Hog Ranch database. After location for each sample is collected using a handheld GPS.
Data spacing and distribution	All soil samples reported in this announcement were collected at a regular sample interval of 50m x 50m.
Orientation of data in relation to geological structure	The bulk of the gold mineralisation at Hog Ranch is interpreted to be derived from near to vertical structures of various orientations in addition to lower grade dispersed gold mineralisation which extends horizontally away from these interpreted gold bearing structures. The soil sampling program is a regular grid taken on the surface which is predominantly a horizontal slice parallel to the lower grade gold mineralisation and cutting perpendicular to the interpreted gold bearing structures.
Sample security	The Hog Ranch Property is in a remote location with no people present during the soil sampling program other than the supervising geologist, and the field assistant(s). The soil samples were all collected and placed in a central location for XRF analysis and secondary sieving at the closest township of Cedarville under the supervision of Rex's Geologist. At the end of the program, the samples were collected and placed directly into a sample collection trailer for transportation to the independent laboratory, AAL in Sparkes, Nevada.

Based on the known chain of custody of the samples and generally low-grade nature of the soil sampling results, there is no evidence to suggest that any of the samples were interfered with. |
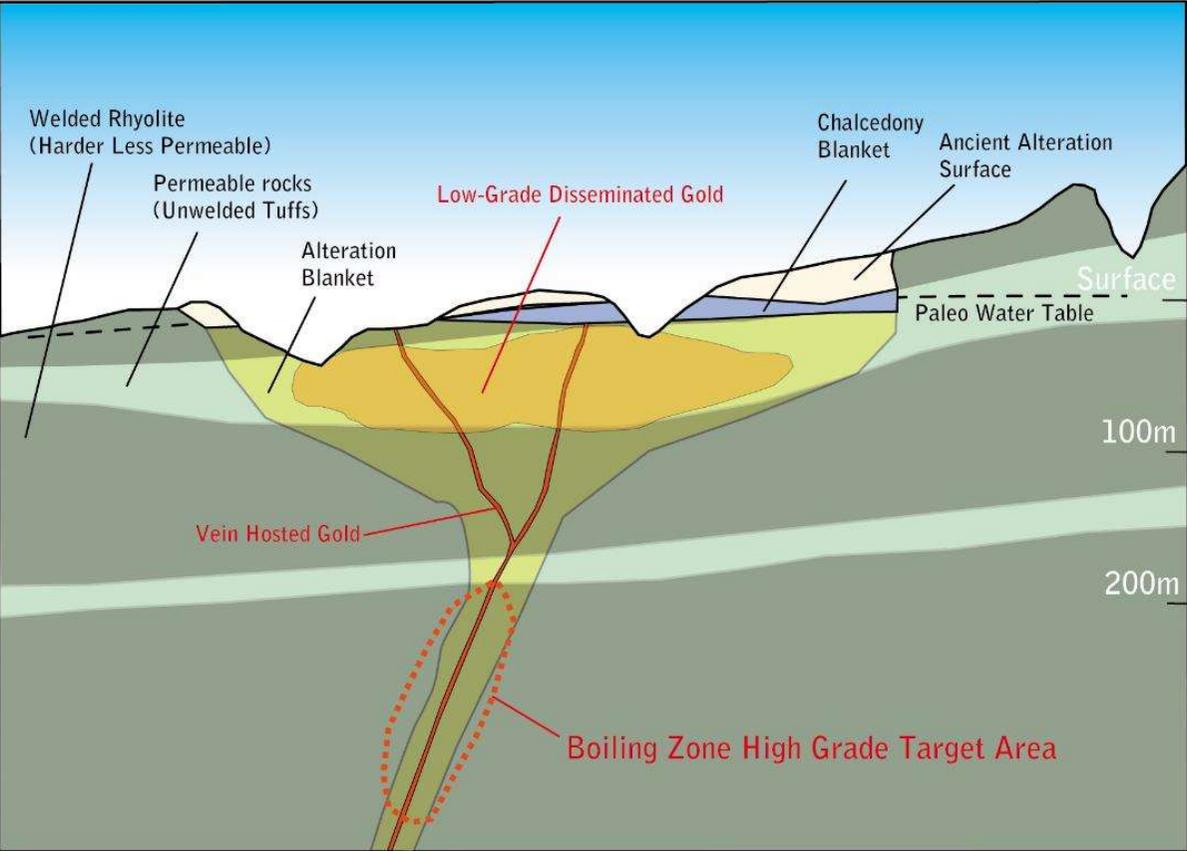| Audits or reviews | No audits or reviews were commissioned for the reported soils sampling program. |

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	The Project is made up of 1,035 unpatented mining claims located in Washoe County, Nevada. The underlying title is held in Platoro West Incorporated (Platoro) and Nevada Select Royalty Inc. The claims are subject to an underlying agreement between Platoro, Nevada Select Royalty Inc and Hog Ranch Minerals Incorporated. The agreement provides full operational control of the Project to Hog Ranch Minerals Inc., with a series of minimum expenditure and activity commitments required to keep the agreement and the option to acquire 100% of Hog Ranch in good standing. In August 2019, Rex purchased a 100% interest in Hog Ranch via its purchase of the private company Hog Ranch Group, which in turn has 100% ownership of the company Hog Ranch Minerals Inc. The mining claims at Hog Ranch are located on open public land managed by the Bureau of Land Management (BLM).
Exploration done by other parties	Gold mineralisation at Hog Ranch was first discovered in 1980 after the Project had been initially explored for Uranium. Ferret Exploration was the first company to actively pursue the gold potential at Hog Ranch, leading to some initial Mineral Resource estimates and some mining proposals. A consortium made up of Western Goldfields, Geomax (parent Company of Ferret Exploration) and Royal Resources ultimately provided the funding to commence gold production at Hog Ranch in 1986 via open pit mining and heap leach methods under the name of Western Hog Ranch Inc. After approximately 18 months of production, the Project was subsequently sold to WMC, who purchased 100% of Hog Ranch in early 1988. WMC commenced a significant exploration effort, drilling over 1,600 RC holes, a series of additional deep diamond drill holes and further detailed studies during the life of the operation which continued until 1991. Residual gold production and subsequent rehabilitation commenced soon after the mining operations ceased, all of which was completed by 1994. A summary of the gold production and geological information that was obtained during the mining operations was later summarised in a paper by Bussey (1996) – see Table 1. **Table 1:** (after Bussey, 1996) Summary of the historical production (mined) from each open pit based on production blast hole information prior to placement onto the leach pads. <table><tr><th>Deposit/Resources</th><th>Tons (Mt)</th><th>Tonnes (Mt)</th><th>Gold (oz/ton)</th><th>Gold (g/t)</th><th>Comments</th></tr><tr><td>Bells</td><td>1.18</td><td>1.07</td><td>0.041</td><td>1.4</td><td>Found first, mined last</td></tr><tr><td>East Deposit</td><td>1.00</td><td>0.91</td><td>0.038</td><td>1.3</td><td></td></tr><tr><td>Krista Deposit</td><td>4.64</td><td>4.21</td><td>0.036</td><td>1.23</td><td>Largest deposit</td></tr><tr><td>Geib Deposit</td><td>1.28</td><td>1.16</td><td>0.033</td><td>1.13</td><td></td></tr><tr><td>139 Deposit</td><td>0.23</td><td>0.21</td><td>0.028</td><td>0.96</td><td>Local visible gold</td></tr><tr><td>West Deposit</td><td>0.17</td><td>0.15</td><td>0.045</td><td>1.54</td><td></td></tr><tr><td>TOTAL</td><td>8.5</td><td>7.7</td><td>0.036</td><td>1.23</td><td></td></tr></table>

Criteria	Commentary
	Post-mining explorers at Hog Ranch have had small exploration campaigns relative to the exploration effort that preceded and was ongoing during the mining period. Cameco was the first company to look in more detail under the cover rocks to the west towards an earlier discovery called the Airport Zone. Cameco's drilling effort did intersect significant gold mineralisation and proved the evidence for further potential of shallow gold mineralisation at Hog Ranch under the cover rocks on the western side of the property.
	The next series of exploration efforts changed focus towards the potential for vein hosted gold mineralisation at greater depths underneath the shallow lower-grade gold that was the focus of earlier exploration and mining. This led to a number of companies starting with Seabridge and followed by Romarco and then ICN, all of which completed some further mapping, data compilations and subsequent diamond and RC drill testing.
	The latest exploration effort prior to the acquisition of the Project by Rex was two (2) lines of 2D seismic, completed by Hog Ranch Minerals Inc., which were completed as a precursor to a planned 3D seismic survey, again in an attempt to uncover the location of potential high-grade vein hosted gold mineralisation at depth.
Geology	The geological setting, alteration and characteristics of the gold mineralisation defined at Hog Ranch all provide strong evidence that Hog Ranch is a low sulphidation epithermal style of deposit which formed close to the surface (Figure 6). **Figure 6:** *(modified from Hedenquist, et al., 2000) Schematic representation of the geological environment for the formation of low sulphidation epithermal deposits.*

Criteria	Commentary
	Large zones of advanced argillic alteration, and horizontal layers of quartz ("Chalcedony Blanket") as defined in Bussey, 1996 and which can still be observed in the field today, indicate that the gold deposits were formed very close to a paleo water-table (Figure 8).
	In addition, evidence from fluid inclusion work indicates that the shallow gold mineralisation at Hog Ranch formed very close to the paleosurface at the time that the gold mineralisation was deposited. The fluid inclusion work also implies a depth of formation to be less than 200m from the paleosurface, with approximately 100m of erosion of the paleosurface to the current topography also implied from modelling of the data obtained from the fluid inclusion work (Bussey, 1996).
	Within the northern mineralised zone and within the series of historical open pits, it was noted that the alteration and gold mineralisation was more favourably emplaced along more permeable unwelded tuff rocks. The unwelded tuff units, where present close to the historical surface, have created a favourable environment for the formation of an extensive shallow "blanket" of bedding parallel gold mineralisation.
	Figure 7: *(modified after Hedenquist et al., 2000) Schematic representation of the boiling zones within a low sulphidation epithermal deposit of the type interpreted to be similar to how the gold mineralisation formed at the Hog Ranch Property.*

Criteria	Commentary
	The hydrothermal fluids that have resulted in both the alteration and gold mineralisation are interpreted to have been linked to a deep-seated source via a series of faults which acted as the plumbing system required to bring the mineralising fluids up to the paleosurface at Hog Ranch. This model of emplacement and formation for shallow epithermal gold mineralisation is similar to many epithermal deposits worldwide as documented by many authors (ie. White and Hedenquist, 1995; Hedenquist, et al., 2000; Sillitoe; R. H., 1993, Corbett, 2002) (Figure 7).
	Some variations exist at Hog Ranch compared to the genetic model postulated in Figure 6 which is largely due to the physical characteristics of the host rocks. One key feature at Hog Ranch is that the shallow gold mineralisation has permeated more favourably along the unwelded tuff horizons at a position which is within 100m vertically beneath the paleo water-table.
	In addition, a separate target type is interpreted to exist in association with quartz-adularia veins at depth, within an interpreted boiling zone where very high-grade gold mineralisation may have developed. The position for this target type is speculated to exist at a depth of over 200m beneath the paleo water-table and down to a limited, but undetermined depth.
	Since the deposition of gold, surface weathering effects have cut into the current landscape and exposed parts of the large alteration system associated with the gold forming event at Hog Ranch.
	As represented in Figure 8, the geological model for the gold mineralisation types at Hog Ranch details two major deposit types, based on the current level of understanding.
	1. Extensive shallow and low-grade gold mineralisation within 100m of the paleo water-table, which has favourably extended along the more porous unwelded tuff units; and
	2. Higher-grade quartz-adularia vein hosted gold mineralisation within feeder structures underneath this large system, which would have most likely developed at over 200m beneath the current day surface over a position known as the boiling zone.

Criteria	Commentary
	  Figure 8: *Schematic diagram representing the current day setting of the gold target types that are interpreted to exist relative to the Volcanic Host Rocks and the broad alteration zones at Hog Ranch.*
Drill hole information	Not Applicable, No drilling conducted.

Criteria	Commentary
Data aggregation methods	All results are represented as a colour contour map based on the results received from the laboratory. All results received are show in the reported figures for each location.
Relationship between mineralisation widths and intercept lengths	Not Applicable, No drilling conducted.
Diagrams	See Figures 1 and 3-5 for summary representation of the soil sampling results pertaining to this announcement.
Balanced reporting	All results have summarised in Figures 1 and 3-5 relating to the gold in soils and the most significant pathfinder element (Arsenic).
Other substantive exploration data	Hog Ranch Property has been the subject of extensive exploration and historical drilling, predominantly over the period from 1981 through to 1997, in addition to a period of historical mining from 1989 to 1991. Rex has reported drilling information from work completed in 2019 and 2020 by the Company in earlier announcements, including a summary of the historical drilling information which was reported in the Mineral Resource announcement published on 2 September 2019.
Further work	Further soil sampling is underway based on the results reported in this release. The results have provided Rex with the confidence to move forward with a new large soil sampling program to cover the entire area which makes up all the Mining Claims under the control of Rex at Hog Ranch.