## **ASX Announcement**

Wednesday 25th September 2019





# NEW GEOPHYSICS IDENTIFIES NEW DRILL TARGETS AT ECRU, NEVADA

S2 Resources Ltd ("S2" or the "Company") advises that recently acquired geophysics has highlighted new targets for drilling at its Ecru project, which is located in the Cortez district of Nevada, USA (Figure 1), otherwise dominated by Nevada Gold Mines (the Nevada joint venture between Barrick and Newmont Goldcorp).

Newly acquired magnetic data has identified a large circular magnetic feature (up to 2 kilometres across) within the project area, comprising four discrete magnetic highs (Figure 2). The magnetic data has been integrated with the Company's gravity and AMT data, which shows that these magnetic highs broadly coincide with gravity lows and surround a central gravity high. The circular magnetic feature is located at the intersection of a series of interpreted north-south and east northeast-west southwest trending structures.

The circular magnetic feature may represent a buried intrusion, either as a central intrusion with magnetic alteration haloes within the surrounding sediments, or as four discrete magnetic intrusive bodies. This interpretation is supported by earlier S2 drilling which intersected narrow, low grade gold-silver intercepts associated with zones of brecciation, silicification and overprinting argillic alteration, within broader multi-element geochemical haloes (with elevated antimony, arsenic, mercury, copper, zinc, molybdenum and tellurium), consistent with an intrusion related origin (refer to S2 ASX announcement dated 14 February 2019).

The identification of a potential intrusive complex within the Ecru project is considered highly significant, given that Nevada Gold Mines' 2.7 million-ounce Robertson gold deposit, which is located immediately south of the Ecru project, is an intrusion related gold-silver skarn deposit (refer to Coral Gold's NI43-101 report of January 2012).

Additionally, there is no discernable magnetic signature associated with the large gravity high anomaly located to the northeast of the intrusive complex (see Figure 2). This is significant as the magnetic results do not indicate the presence of a buried intrusion, suggesting that the gravity anomaly may represent an uplifted body of prospective lower plate carbonate sediments consistent with a Carlin-style gold target.



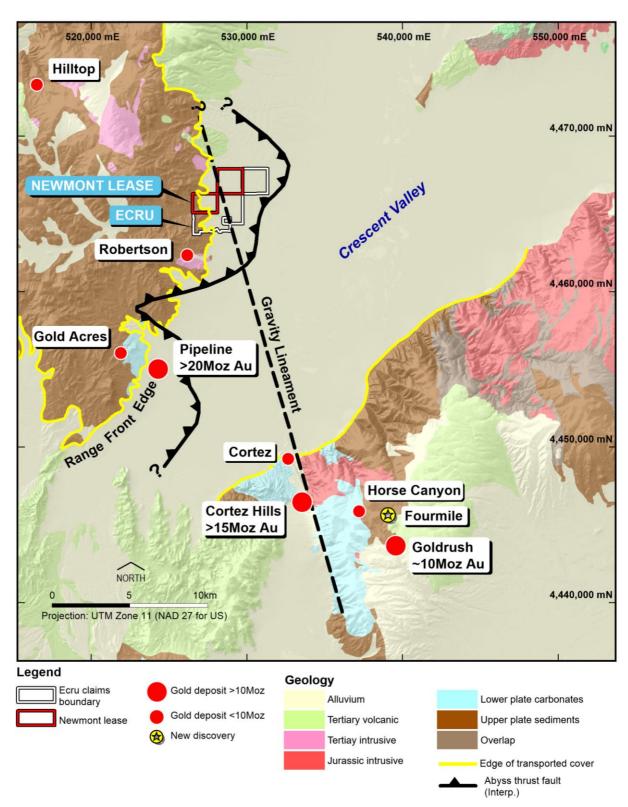


Figure 1. District geological plan showing the Ecru project area and the Newmont lease into which S2 is earning 70% interest, within the context of nearby gold mines.



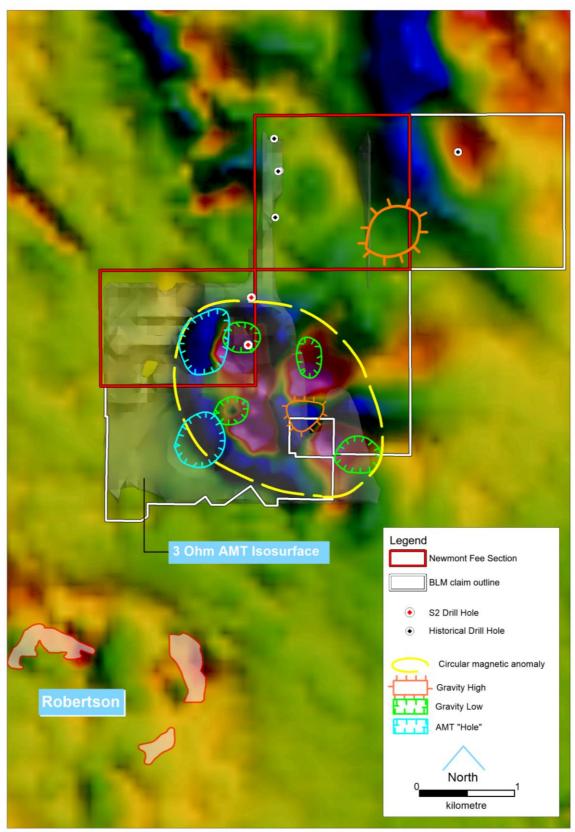


Figure 2. Compilation geophysical plan showing and gravity and AMT anomalies over image of recently acquired aeromagnetics.



The Company is now in a position to test several targets spanning both known deposit styles within the project area. Drilling is scheduled to commence in the next few months, once an appropriate drill rig is secured.

#### **Background**

The Ecru project is located to the north of the giant Cortez gold mining complex, owned by the Barrick-Newmont Goldcorp Nevada Joint Venture. The complex comprises a number of individually significant gold deposits including Pipeline (~20Moz), Cortez Hills (~15Moz), Goldrush (~12Moz), the new Four Mile discovery (refer to Nevada Gold Mines' Q3 2019 Quarterly Presentation) and also the Robertson deposit located on ground immediately to the south of the Ecru project, which comprises a resource of 2.74 million ounces of gold (refer to Coral Gold's NI43-101 report of January 2012).

S2 is earning a 70% interest in the Ecru project from Renaissance Gold by expenditure of US\$3 million before 30<sup>th</sup> July 2022. Through the area of influence provisions in the S2-Renaissance agreement, S2 is also earning a 70% interest in adjacent ground subleased from Newmont Goldcorp by Renaissance (refer to S2's ASX release of 3<sup>rd</sup> August 2018).

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#### **Competent Persons statement**

The information in this report that relates to Exploration Results from Nevada is based on information compiled by John Bartlett, who is an employee and shareholder of the Company. Mr Bartlett is a member of the Australian Institute of Mining and Metallurgy (MAusIMM) and has sufficient experience of relevance to the style of mineralization and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Bartlett consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

#### **Annexure 1**

The following Tables are provided to ensure compliance with the JORC code (2012) edition requirements for the reporting of exploration results.



## **SECTION 1: SAMPLING TECHNIQUES AND DATA**

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g. 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.	Rock chip samples were collected by random chip sampling with a geological hammer of about fist size material to make a collective sample weight of about 0.5-2kg.  Drilling is undertaken using Idea Drilling or Boart Longyear, based out of Nevada, USA. Drilling was carried out using either PQ3 or HQ3 with a core size of 83mm or 61.1mm respectively. The samples are logged and marked up by S2 personnel. Unbiased core sample intervals were sent to Bureau Veritas in Reno, Nevada to be cut and sampled with ½ core submitted for analysis.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	Rock material that comprised the samples were selected randomly without bias to material appearance to give an accurate representation of the sample being collected.  For diamond core, sampling and QAQC procedures are carried out using S2 protocols as per industry best practice.
	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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information	Samples were dried, crushed with a 500g split pulverised (total prep). Samples were analysed using an aqua regia digest ICP/OES and ICP/MS (Code ME-MS41) and by fire assay with an ICP/AES finish (Code Au-ICP21). The following elements are included in the assay suite: Ag, Al, As, Au, B, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, , Hf, Hg, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn, Zr.
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	Diamond drilling with PQ3 or HQ3 wireline bit producing an 83mm or 61.1mm diameter core sample respectively.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed	Diamond Drill core recoveries are visually estimated qualitatively on a feet basis and are recorded in the database.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	Triple tube drilling, use of drilling muds and short drill runs are utilized in areas of difficult drilling to maximize recoveries and minimize lose of fine / broken material.
	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.	No relationship can be established at the present time.



Criteria	JORC Code explanation	Commentary
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.	The logging uses a standard legend developed by S2 which is suitable for wireframing. Exploration holes are not routinely logged geotechnically however holes have been geotechnically logged to attempt to establish potential fault zones.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	All core has been photographed both dry and wet. Geological logging of the diamond drill holes is onto physical log sheets followed by importing into S2's central database.
	The total length and percentage of the relevant intersections logged	All drill holes were logged in full.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Core sawn in half and half core taken
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	No sampling of non core drilling has taken place.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Samples are analysed for gold using 30g lead collection fire assay with an ICP/ES finish at the ALS laboratory in Reno, Nevada. This sample is considered a total digest and the highest quality assay technique available.
		In addition an extensive multi-element suite (including Ag, Al, As, Au, B, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, Hg, K, La, Mg, M Ag, Al, As, Au, B, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, , Hf, Hg, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn, Zr.) is analysed using an aqua regia digest with an ICP-MS finish. This method is a partial digest, but is considered appropriate to identify potential pathfinder elements which may assist in locating nearby gold mineralisation.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Laboratory Quality control procedures include submission of Certified Reference Materials (CRM's), blanks and duplicate samples with each batch of samples. Selected samples are also re-analysed to confirm anomalous results.
		Grind size checks are routinely completed to ensure samples meet the industry standard of 85% passing through a 75μm mesh.
	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.	Samples are collected using an unbiased half core sample. Duplicate samples are collected by taking a second split form the crushed material.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are considered appropriate for gold mineralisation.



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.	Samples are analysed for gold using 30g lead collection fire assay with an ICP/ES finish at the Bureau Veritas laboratory in Reno, Nevada. This sample is considered a total digest and the highest quality assay technique available.  In addition an extensive multi-element suite (including Ag, Al, As, Au, B, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, , Hf, Hg, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn, Zr.) is analysed using an aqua regia digest with an ICP-MS finish. This method is a partial digest, but is considered appropriate to identify potential pathfinder elements which may assist in locating nearby gold mineralisation.
	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.	Not applicable – no geophysical techniques have been used to determine an assay value.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Sample preparation checks for fineness were carried out by the laboratory as part of their internal procedures to ensure the grind size of 85% passing 75 micron was being attained. Laboratory QAQC involves the use of internal lab standards using certified reference material, blanks, splits and replicates as part of the in house procedures.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	The Exploration Manager of S2 has visually verified the results.
	The use of twinned holes.	No twin holes have been undertaken by S2 Resources Ltd.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary sampling data is collected in a set of standard Excel templates. The information is managed by S2's database manager for validation and compilation into S2's central database
	Discuss any adjustment to assay data.	No adjustments or calibrations were made to any assay data reported.
Location of data points	Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	Drill sites were defined using a Garmin handheld GPS with an accuracy about +/- 4m for easting and northing.
	Specification of the grid system used.	The grid system used was NAD 27 Zone 11.
	Quality and adequacy of topographic control.	No controls were utilized and are not deemed important for the regional nature of drilling.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Drilling has targeted specific geological features and are not completed on specific spacing at this time.
	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.	Data spacing and distribution is not sufficient at this stage to allow the estimation of mineral resources.
	Whether sample compositing has been applied.	No compositing has been applied



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.	Drillhole orientation is reconnaissance in nature and is not necessarily drilled perpendicular to the orientation of the intersected mineralisation.
	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.	No relationship to orientation of key mineralized structures has been established at this time.
Sample security	The measures taken to ensure sample security.	Chain of custody is managed by S2 Resources. Samples are stored on site and then delivered to the laboratory in Elko, Nevada. Tracking sheets have been set up to track the progress of batches of samples.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits have been undertaken and it is not considered material at this stage of exploration.

### **SECTION 2 REPORTING OF EXPLORATION RESULTS**

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.	S2 Resources Ltd, through its subsidiary Nevada Star Exploration LLC, is earning into the following mineral tenure via an agreement with Kinetic Gold (US) Inc ("Kinetic") and its parent company Renaissance Gold Inc. ("RenGold")  1. Kinetic holds an Option to Purchase under the Ivy Option Agreement 112 Mineral Claims (NMC1098847–1098958) held by Ivy Minerals Inc within Lander County, NV.  2. Kinetic holds a sub-lease agreement with Newmont (USA) Ltd to the mineral rights to private held lands on 2 section blocks (T29N R47E Section 27 (AII) and T29N R47E Section 33 (N1/2, N1/2S1/2).  All are subject to certain confidential royalty agreements, payable by Nevada Star Exploration LLC to Kinetic Gold (US) Inc and third parties  Based on a due diligence process, no commercial, historical, native title, heritage or environmental impediments are known
	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.	Based on a due diligence process, the claims are in good standing and no known impediments exist on tenement actively explored.



Criteria	JORC Code explanation	Commentary
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Ivy Minerals, in JV partnership with Kinetic Gold (US) Inc (now a wholly-owned subsidiary of RenGold), completed broad spaced enzyme leach and gravity surveying over the property.
		Limited information on any earlier exploration activities is available, however it is known that Barrick Gold completed one historic RC drill hole on the property in 1995.
		In addition Victoria Resources completed three diamond holes between 2007 and 2008.
		Variable data on each of the historic drill holes is available and this has been captured in the S2 database. No samples are known to survive and the historical results have not been verified by S2 Resources
		All known historic drill site has been visited and verified by a geologist working on behalf of S2 Resources.
Geology	Deposit type, geological setting and style of mineralisation.	The projects are located within the Great Basin of Nevada and the deposit type being explored consists of the Carlin-style which comprises fine-grained disseminated replacement sulphide (pyrite) mineralisation in zones of silicified, decarbonatised, argillised, silty calcareous rocks and associated jasperoids.  The mineralisation is hosted within Palaeozoic carbonate and siliciclastic sedimentary rocks which were deposited in a marine setting ranging from deep to shallow water on a former western continental margin of North America. These units were deformed by the Antler Orogeny and later intruded by felsic bodies of varying ages. The age of the mineralisation is Eocene and ranges between 34-42 Ma. Later faulting developed the distinctive 'Basin and Range' topography of the area.
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.	Refer to Annexure 1 and sample plans in text.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	For drilling undertaken by S2, a lower cut-off of 0.5 ppm gold has been applied. No upper cut-off has been applied to results. Where individual results have been combined, results have been length weighted.  For historical results a 0.1ppm gold was used as the lower cut-off, however the method of averaging is unknown.



Criteria	JORC Code explanation	Commentary
	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.	Historical results do not report any internal high grade results.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not applicable – no metal equivalent values have been reported.
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 (e.g. 'down hole length, true width not known').	It is not known at this stage what the angle between drill core and the geometry of mineralization.
Diagram	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.	All Figures are contained in the body of the text.
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 to avoid misleading reporting of Exploration Results.	All results considered significant are reported.
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.	S2 has carried out a detailed gravity survey (100m x 100m) over the Ecru project as well as a 3D audio-magnetotelluric geophysical survey over the project. Both datasets have been processed and undergone inversion modelling with the results integrated into the geological model.  Additionally, S2 has acquired the data of a historical aeromagnetic survey (200m line spacing) over the project. This data has been processed and integrated into the geological interpretation.
Further work	The nature and scale of planned further work (e.g. 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	