Letter of Opinion

On the

Red Rock Canyon gold project

Cochise County, Arizona.

04 May, 2023.

Prepared for: Liberty Star Uranium & Metals Corp. d/b/a Liberty Star Minerals (LBSR).

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Executive Summary:

It is the author's opinion that LBSR can benefit from conducting small scale metallurgical testing in the RRC project area. These tests will provide proof of concept and value of the deposits as well as generating a well studied database of information which will be required in the future should the project go into full scale production.

LBSR is strongly urged to seek out one or two well funded JV partner in the form of Junior Exploration companies. The entire land package visited has a great potential for hosting both gold and base metals mineralization since it appears to contain an entire porphyry system from intrusive up to boiling epithermal veins at surface. One partner can focus on the porphyry, while the other focusses on the gold. Another alternative is to find one partner to work on the porphyry while the option payments from that party can help fund LBSR's exploration efforts to improve the value of the gold bearing land package. The author can be available to assist LBSR with those efforts should they desire.

Introduction:

The author was engaged by Liberty Star Minerals (LBSR) to provide an informed opinion on the feasibility of conducting small scale mining operations on sections of the Red Rock Canyon (RRC) gold property with the goal of improving the overall attractiveness and value of the property for potential investors and joint venture partners.

From the 23rd until the 26th of April, the author toured the property with Mr. Brett Gross, CEO of LBSR and Mr. Jay Crawford, LBSR's Field Manager for the project. Three days were spent in the field and one day in the office reviewing all historical data available for the property as well as State regulations and permitting requirements for mining and exploration.

Located about three miles south of the town of Tombstone Arizona, the RRC property was recently split off of the larger Hay Mountain copper porphyry property by LBSR to focus on the gold bearing jasperoid veins hosted in the regional limestones of that area. The small-scale mining potential for these jasperoids is the objective of this opinion letter, however brief stops were made at other areas of the Hay Mountain property site for better understanding of the geological context of the area.

Field work:

Section 28 was visited on the first day. This area consists of several lenses of gold bearing jasperoids. The jasperoids trend NW/SE and dip sub-vertically. The lenses contain brecciated fragments of limestone which have been completely altered by silica flooding. They exhibit boiling textures which indicates that the entire epithermal sequence remains in place. Nine historical drill holes were done on this part of the property, with five of the nine reporting "significant mineralisation" in historical reports. Gold grades were reported to average 0.091 oz/t (3.5g/t) including intercepts of over 1 oz/t. Widths of intercepts ranged up to 45' although true widths were not reported. No drill section compilations were found in the historical reporting.

The average width of these jasperoid lenses on surface is about 9', however the margins and strike extents are covered in soils in many cases. These lenses are likely connected to the "Barney's Hill" showings immediately to the southeast, but that connection is hidden under alluvium in a draw that separates the two showings.

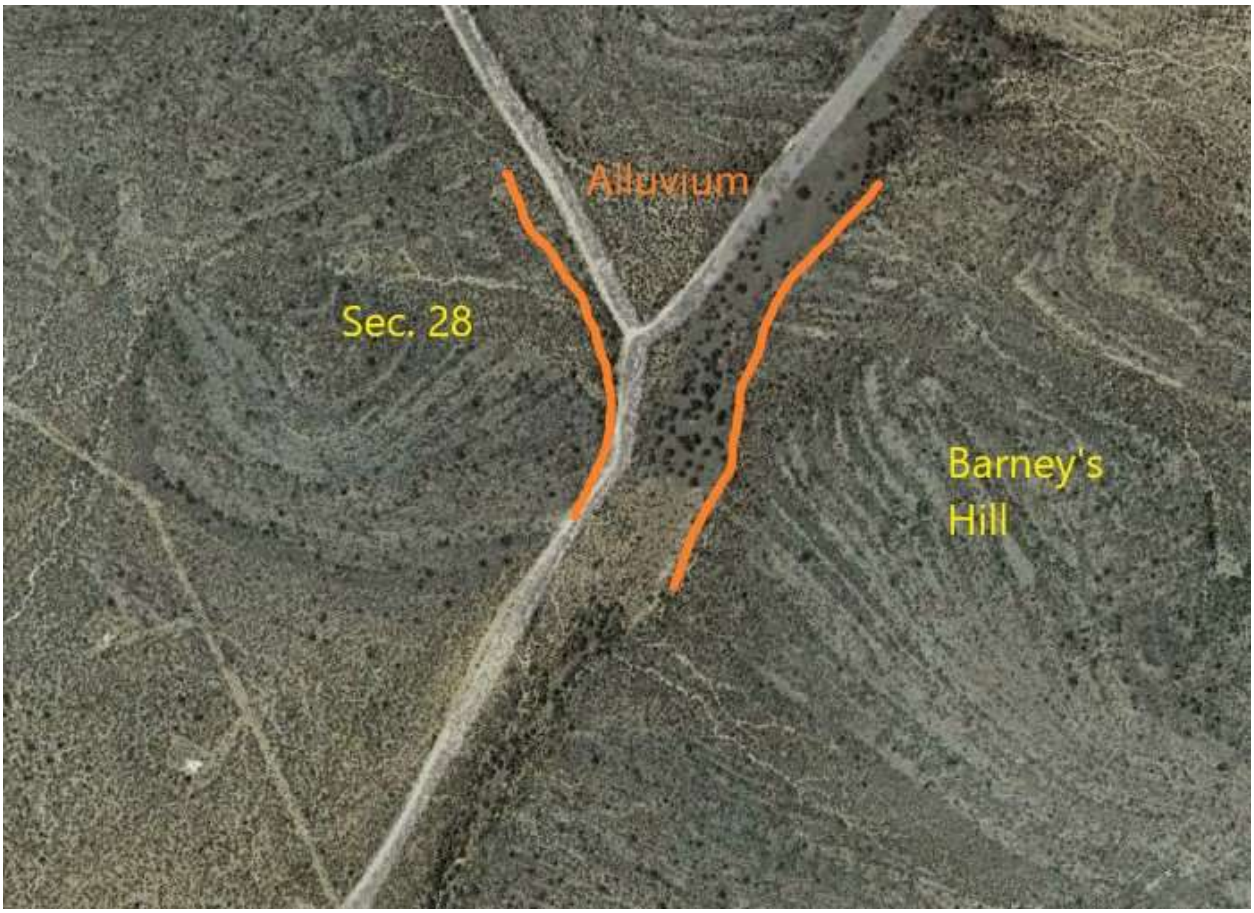


Image adapted from Google Earth.

Barney's Hill was visited on the first day. Like the mineralisation at the Section 28 showing, it is comprised of jasperoid lenses trending NW/SE and has had numerous grab samples collected which ran >0.03 oz/t. The most prominent vein in this zone has a strike length of over 2000' and strikes roughly N/S, almost perpendicular to the general trend. The east end of this vein dives under overburden, while the western end is on a cliff face, likely a local fault related to regional structures. The vein may continue to the west under the alluvium on the valley floor. Hematite alteration in this zone is stronger than in Section 28, although it is still considered 'moderate' in nature.

It is interesting to note that the gold values in these jasperoids is largely contained within the altered limestone fragments within them. PXRF readings taken while in the field showed grades up to 0.8 oz/t within the fragments, but no detectable gold within the matrix of the veins. This may indicate the presence of a rich skarn or carbonate replacement deposit at depth.

Both Barney's Hill and Section 28 lie on the flank of a NW/SE trending magnetic high and have background level responses. This supports the theory that these epithermal veins, which are not magnetic, have been emplaced due to porphyry related processes. The magnetic high may represent a diorite plug at depth, there is an outcrop of diorite 800' north of Section 28 which reported 0.3 oz/t in a grab sample from its margin. It may also represent a skarn deposit at depth

in the limestones. This latter theory is supported by the presence of gold enriched limestone clasts at both of these locations.

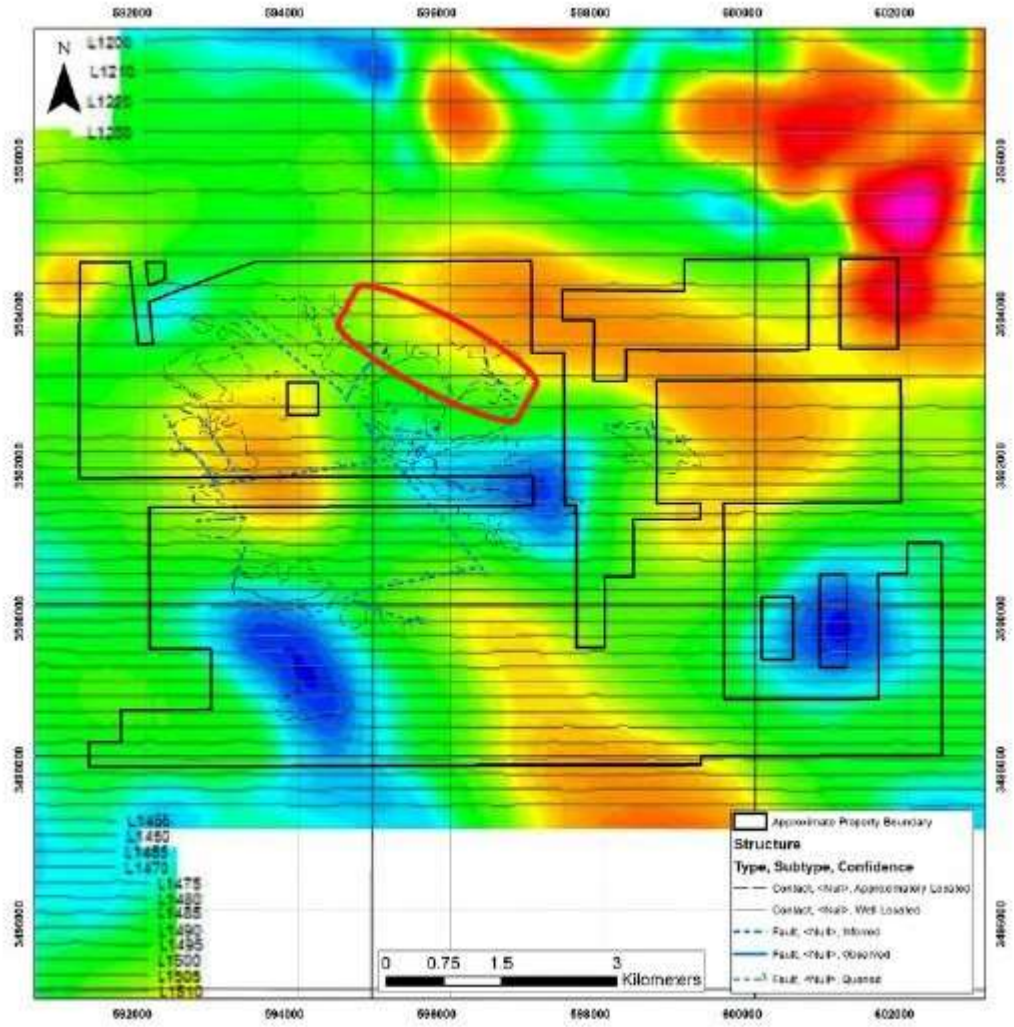


Image adapted from Koning (2020) with RRC property shown in red ellipse.

The "Zebra" target was visited on day two. This zone consists of numerous jasperoid bodies, the most predominant of which is a sheeted vein, averaging 10' in width, and traceable at surface for over 125'. The vein trends ENE and is subvertical. Previous mineral rights holders have conducted some blasting in this area. Hematite alteration is far more predominant here than in the previous two sites visited indicating a higher sulphide content in the fluids.

Boiling textures are present at Zebra, indicating that this is the top of the hydrothermal system, and grades have been reported to be between 0.03 and 0.15 oz/t from grab samples. One grab was taken 800' north of this area by LBSR that reported 0.31 oz/t. The presence of massive fluorite and some barite reinforces the fact that the bulk of the mineralisation at this target lies at depth.

Day three in the field consisted of studying more regional geology to gain an overall understanding of the processes which took place on the claim package.

The "Rhyolite" outcrop was visited on the roadside of route 80. This is a highly argillically altered felsic intrusive which is likely related to the predicted porphyry intrusive at depth in the valley. It is a tan brown on weathered surfaces and bright white on fresh exposures. The only recognizable minerals remaining in the matrix are euhedral quartz and hornblende phenocrysts.

The outcrop is cut by a large regional fault. Motion on the fault appears to be strike slip in nature. Striking 140 and dipping at 72 to the SW, the fault is over 30' wide and displays intense shearing locally. Hematite staining within the zones of higher strain is intense. The location and orientation of this fault were recorded into the GIS software used by LBSR for future reference.

A very large (and extensive) quartz vein was also visited on day three. Located on the eastern part of the land package, this vein is large enough to appear on satellite imagery. At the locations prospected, the vein averaged 20' in width. This vein connects the 'Quartz Hill' and 'Jay's Hill' showings on the RRC property.

Composed mostly of aphanitic quartz and carbonate minerals, there are some euhedral quartz crystals present to 3mm as well as locally abundant limestone clasts which have undergone intense argillic and hematite alteration.

Striking 299 and dipping 73 to the NE, the vein shows at least five different intrusive events represented as differences in matrix colour and relative abundance of wall rock fragments and degree of alteration in those fragments. Locally, the vein appears highly sheared parallel to strike and dip, indicating reactivation of the host fault.

Day four, and most evenings during the visit were spent reviewing past reports from the property, State mining regulations and the permitting processes required for different aspects of the work. Mr. Crawford, the Field Manager for LBSR was an invaluable assistance in this research.

Discussion:

Since the objective of this exercise was to explore the benefits of small-scale mining on the RRC project area, most of this section will focus on the Section 28 to Zebra areas, with a short note on the huge quartz vein at the end.

Study of the Arizona mining regulations did not reveal any special dispensations for 'bulk sampling.' In many areas, companies are allowed to conduct limited (tonnage prescribed by the regulations) extraction and processing without having to conduct full scale environmental/archaeological studies beforehand. As such, LBSR would have to pay the cost of this full pre-production study should they wish to announce limited production from the site.

The regulations DO allow for 'sampling for metallurgical purposes' based on the existing GFOP (work permit.) This would involve hand tools only, a small generator with a power hammer and

a lot of buckets. From discussions with Mr. Crawford, this would be the least complicated and least expensive method to move forward with small scale extraction.

While Section 28 and the Zebra showings are readily accessible from the existing trails, Barney's Hill will require a track plan and the permitting that goes along with it should LBSR decide to start producing tons from this location.

Barney's Hill and the Zebra showings will be far easier to sample due to their exposure. The Section 28 material is flush to the ground and will require rock saws to open up a working face. This is unfortunate as Section 28 contains the highest-grade material out of the three zones.

For a processing site, LBSR should leverage the goodwill they have formed with the private landowners in the area. Material can be transported to the processing site by truck. The author spent over an hour discussing options with Mr. Keith Bowen of Helena Montana. Mr. Bowen is conducting this type of operation currently and has many years of experience in the metallurgical and milling sectors in the US. His advice was to create a vat leaching system, as opposed to a heap leaching system. A vat leach tank which is contained inside of a secondary containment system, like a square concrete pool with a non-absorbent liner in it allows for immediate identification of any leaks.

LBSR should consult a Metallurgist and Millwright to design the flow chart for this operation.

Historical reporting from Primo Metals indicated 70% recovery from mineralised material in this area. There is no discussion of grind size, nor details on the leaching times nor recovery methods. It is the author's opinion that additional studies by LBSR with regards to grind size and leach time will greatly optimize this recovery. Mr. Bowen suggested starting at 100 mesh grind size since jasperoid is a low-permeability rock.

The large quartz vein on the eastern side of the project is an interesting exploration target that will require a very well funded exploration program. Gold and silver mineralisation in these veins is not only due to the regional chemistry of the host rocks, but also controlled by variations in pressure and temperature during emplacement. This can result in low to no precious metals values at surface, yet silver and then gold can become more abundant with depth. The author has noted this phenomenon in both Ecuador (surface drilling) and Mexico (underground mining and drilling.)

Rather than blindly drilling the vein and risking poor results, the author would recommend a Mobile Metal Ion study (MMI) along the western (hangingwall) edge of the vein itself. This would involve hundreds of soil samples taken along fences 30, 45, 60 yards… from the hangingwall contact. These samples are then analyzed for very tiny amounts (ppb to ppt) of precious metals. If shoots of mineralisation are noted in that study, then a drill program can be set up to test those shoots. Analyses of these types have different names depending on the lab used, MMI being one of them. A discussion with the lab Geochemist will reveal which of their methods can detect these trace amounts of elements. The cost of these samples is on the order of $55 per.

Opinion:

It is the author's opinion that LBSR can benefit from conducting small scale metallurgical testing in the RRC project area. These tests will provide proof of concept and value of the deposits as well as generating a well studied database of information which will be required in the future should the project go into full scale production.

As discussed with LBSR personnel in the field, this approach should be preceded by a systematic channel cutting survey across each of the various jasperoid lenses and veins. Procedures for the channel cutting and MMI surveying are contained in Appendix 1 to this letter. Material from each body should be processed separately at first to determine variability within the mineralized system.

LBSR is strongly urged to seek out one or two well funded JV partner in the form of Junior Exploration companies. The entire land package visited has a great potential for hosting both gold and base metals mineralization since it appears to contain an entire porphyry system from intrusive up to boiling epithermal veins at surface. One partner can focus on the porphyry, while the other focusses on the gold. Another alternative is to find one partner to work on the porphyry while the option payments from that party can help fund LBSR's exploration efforts to improve the value of the gold bearing land package. The author can be available to assist LBSR with those efforts should they desire.

Respectfully submitted,

J. Bryce, B.Sc., CP.

Consulting Geologist.

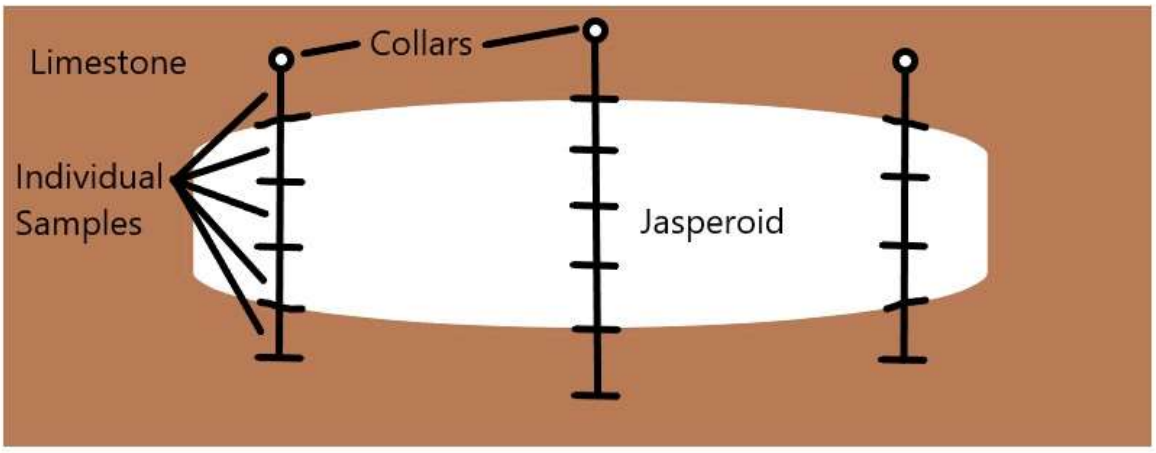
References:

Appendix 1.

Channel Sampling of Jasperoids:

In preparation for sampling the various jasperoids for metallurgical purposes, it is first essential to understand the way in which the gold mineralisation is contained within the jasperoid bodies. This work will involve several field personnel, enough water and gasoline for the rock saw, sample bags and buckets.

The concept is to cut a horizontal 'drill hole' across the full width of the jasperoid, including a few feet of 'waste' host rock on each shoulder. The collars or starting point of each sample should all be on the same side of the vein where possible, and those should be surveyed in with GPS as accurately as possible. The azimuth of the channel must be recorded and the dip is recorded as 'zero' meaning it can be treated as a flat lying drill hole.



Plan view showing channel sample locations across an idealised jasperoid.

The following procedure requires both margins of the vein to be exposed by digging/raking/washing before sampling.

1. The Field Manager or Geologist must first mark out the individual channels and sample cuts (hashmarks) with spray paint. Samples on assumed mineralisation should not be more than 2' in length. Samples on mineralisation do not have to be the same length, and should be split up based on observed differences within the vein itself. This will enable LBSR to determine which phases of the veining carry more or less gold. One sample of host rock must be taken on either 'shoulder' of the sample string to provide a 'null' value, assuming that the gold mineralisation has not bled into the wall rock.

2. The saw operator will cut two parallel lines in the rock along the trace of the spray paint, about 3" apart and 3" deep. They will then cut perpendicular hashmarks at the sample breaks as indicated by the paint. Even with water to cool the blade, a dust mask, rubber gloves, long sleeves and safety glasses are essential for this task.

3. The sampling crew will break out the individual samples using a chisel and small mallet. Samples will be bagged and tagged on-site, closed up and placed in buckets to be transported to the trucks. Every tenth sample (this should be prepared before sampling begins) will be either a blank (known zero gold value), standard (known gold grade) or duplicate of the previous sample, preferably a combination of these. In the case of duplicates, the supervisor must spray an extra line parallel to the sample line for that specific sample, and the cutter needs to cut a third line.

4. Samples can then be submitted for assay by LBSR.

Channel spacing really depends on the supervisor in the field. The length of the jasperoid body will dictate how many channels are cut across it, with a minimum for each being three channels. On larger bodies, a 30' separation between channels will be sufficient. Based on the results of the assays, LBSR will be able to calculate a resource on each target to about 75' depth.

Should LBSR chose to channel sample the very large quartz vein on the eastern portion of the property, a channel sample spacing of 75' (~25m) will be sufficient.

MMI sampling in alluvium:

As discussed in the field, LBSR might consider a test run of an MMI study through the valley which separates the Section 28 mineralisation from that of Berny's Hill and that to the north around the diorite intrusive to test for continuity. This could be a relatively inexpensive test of the value of the method given the limited number of samples.

MMI sampling involves soil sampling along a pre-described grid to detect minute traces of metallic ions in the soil which migrate upwards in undisturbed soil and permeable rock sequences over long periods of geological time. It can be tailored to individual projects depending on the commodity being sought after. In LBSR's case, the author would suggest looking for Au, Ag, Hg and As since the latter three are pathfinder elements for gold in the area.

It is vital that the sample collectors do not wear any jewellery on their hands and wrists, including watches during the collection of these samples. The Geochemist at the laboratory of LBSR's choice can give more complete directions for the collection of these samples.

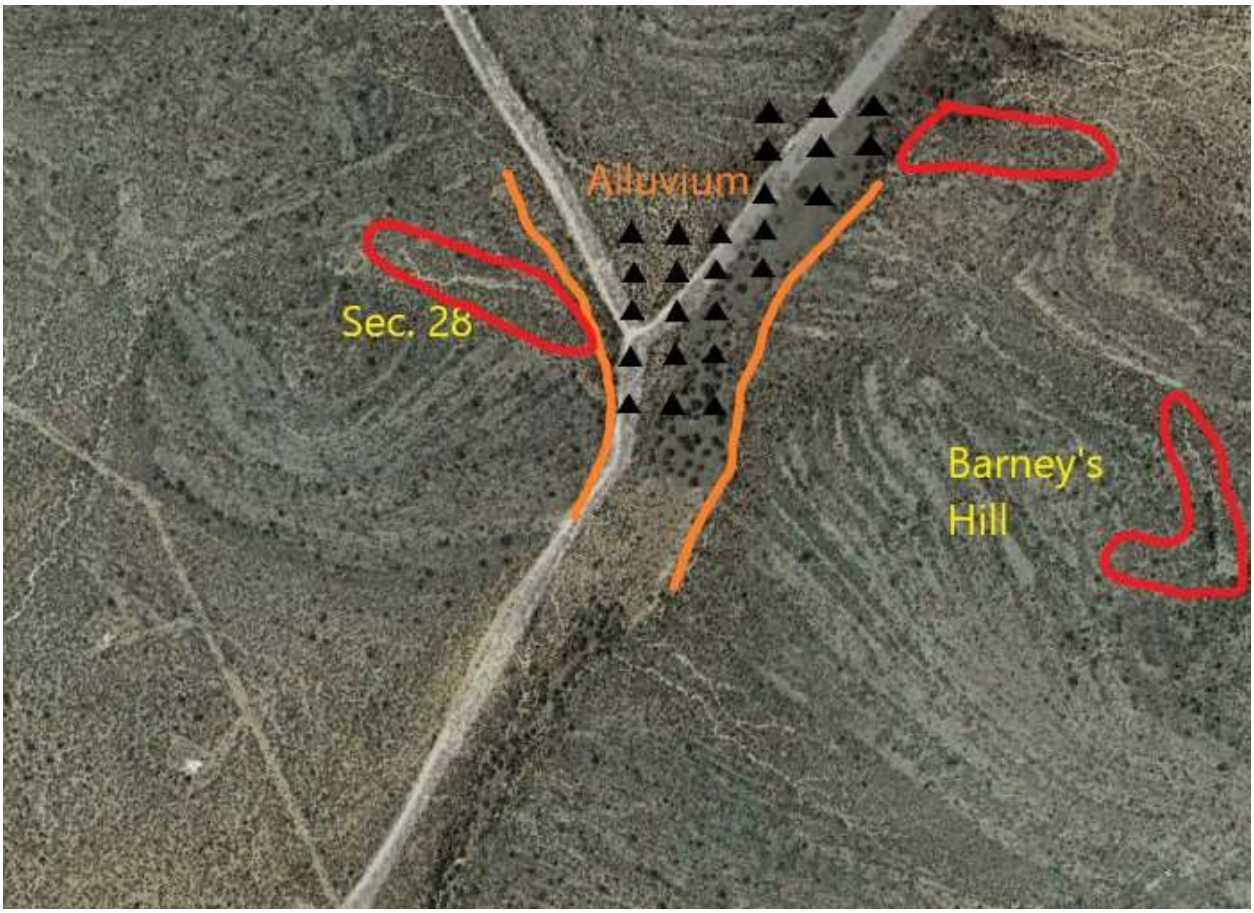


Image from Google Earth. Known mineralisation in red, suggested MMI sample sites in black.

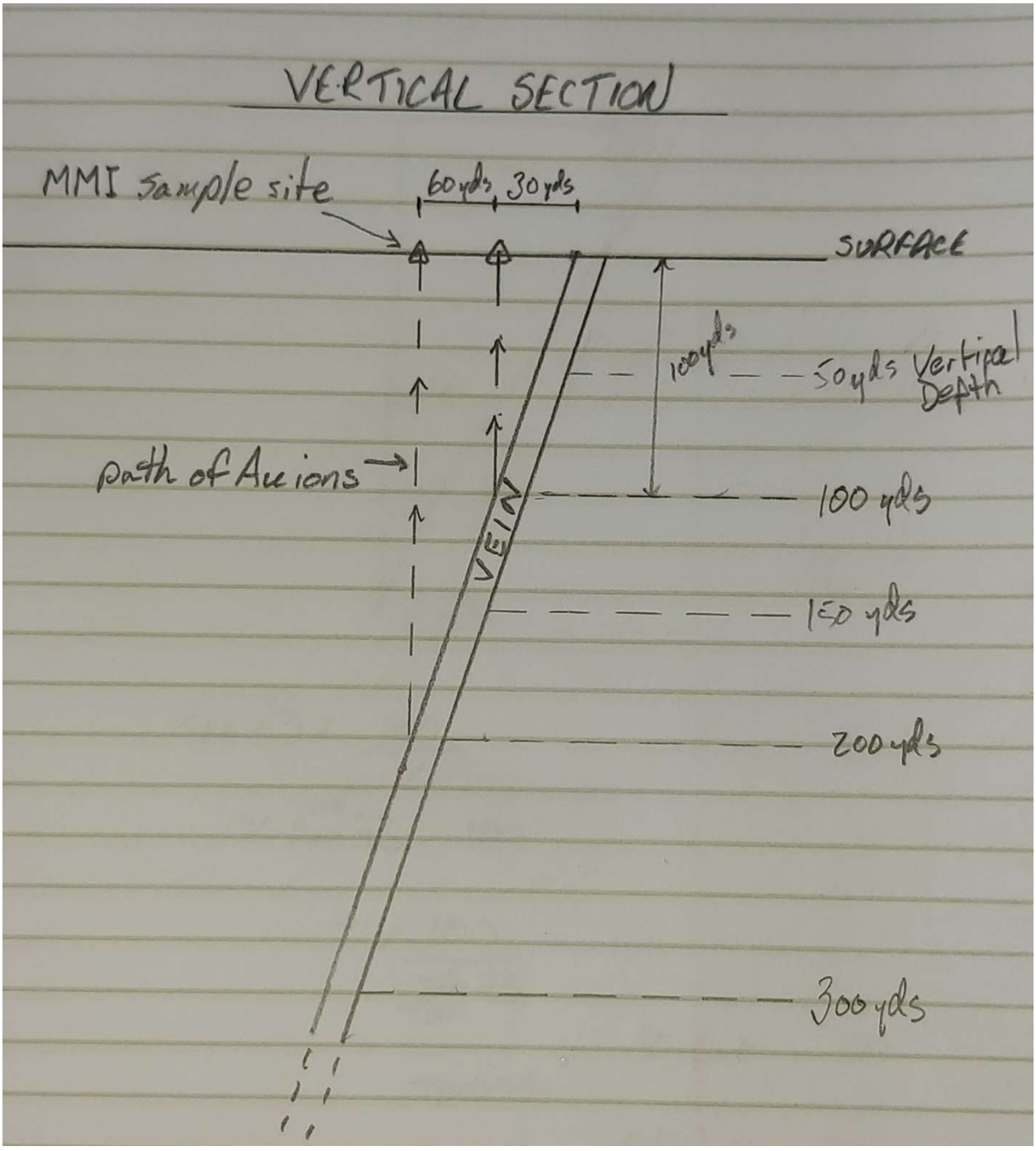
The sample spacing on these sites can be 80' by 80' or larger if desired. They should be spaced in such a way that if anomalies are detected, the spacing between the samples can be halved equally for infill sampling and better definition.

This sampling may provide LBSR with proof of concept, and expansion of known mineralisation.

MMI sampling on the large quartz vein:

It is the author's opinion that this quartz vein is a very interesting exploration target and will be require a large budget to explore effectively.

This vein strikes 299 and dips at 73 to the NE thus the samples must be taken on the east side of the vein to detect ions released from the vein at depth. Below is a sketch of the vein in vertical section looking south and the necessary trigonometry required to set out a sample grid testing the vein at various depths.



Vertical section looking south along the vein dipping at 73 degrees. For every 100 yards vertical depth on the vein, samples must be 30 yards from the vein hangingwall margin.

Offsets on the samples were calculated by: Offset required = vertical test depth/tan(73).

The image below shows an approximated grid, although the actual would be much longer north to south and the data points much more densely packed,

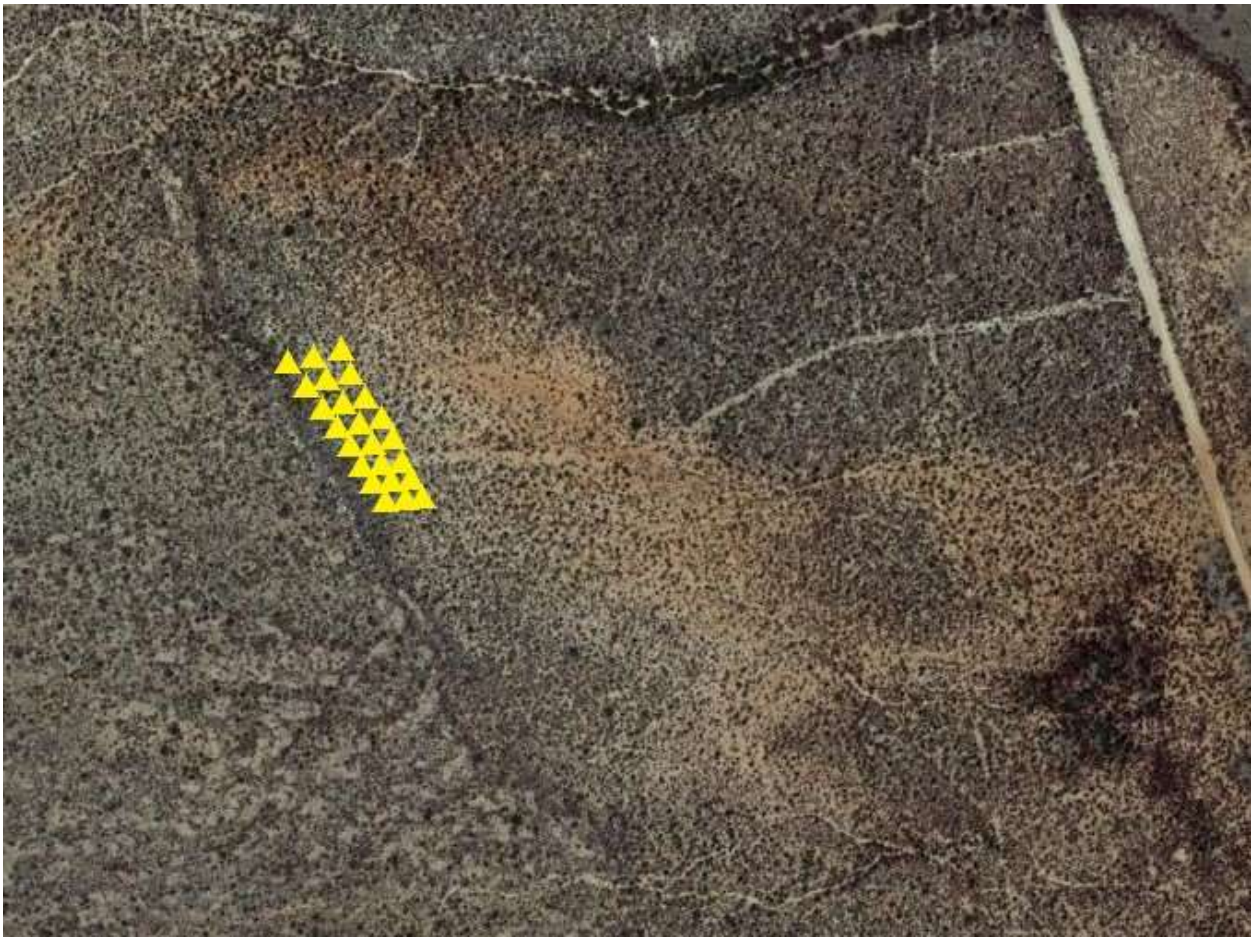


Image derived from Google Earth. The location of the quartz vein coincides with the line of darker vegetation seen on the image.

Should LBSR wish to conduct this survey, the author would suggest two lines, 30 and 60 yards from the vein margin along the length of the vein. Once assays have been returned, infilling locally at 15 and 45 yards may be required for more definition.

If gold mineralisation is noted in this survey, a drill program can be generated to delineate that portion of the deposit.