

2 August 2021



## VISUAL GOLD AND CONFIRMATION MINERALISATION EXTENDS FURTHER SOUTH AT PALM SPRINGS

Meteoric's follow-up drilling program at Palm Springs Gold Project confirms the presence of thick, robust zones of mineralisation south of the 2020 Mineral Resource Estimate (MRE)

### Highlights

- Strategy of targeting anticlinal hinge zones results in immediate success with Visible Gold (VG) observed at three intervals in BCRD484 within a 79m intersection of strongly veined and altered gold hosting syenite
- BCRD 490 has intercepted a similar hinge zone with strong alteration of the target syenite at the anticlinal closure and over 80m of syenite intersected
- Three further diamond holes to be completed in August, each targeting untested anticlinal hinges identified by the 2020 drilling, targeting similar structural positions that resulted in BCRD 467 intercepting 69m @ 4.38 g/t Au in 2020 (ASX release 30/11/2020)
- In addition, Holes BCRD489 & 490, located south of the 2020 MRE, intersected thick downhole intervals of host syenite 80m south of Butchers Creek Resource (5.2Mt @ 1.9g/t Au 319,000 oz), confirming the orebody extends and remains open to the southwest
- Initial assay results due late August
- 2021 regional exploration activities (non-ground disturbing) receive Heritage clearance and to commence in Q3

Meteoric Resources NL (ASX: MEI) (Meteoric or the Company) is pleased to advise that as part of the 2021 exploration program at the Palm Springs Gold Project in WA, it has completed 5 of 8 planned drillholes, with RC pre-collars completed for the balance, and the diamond tails to be completed this month.

### **Dr Andrew Tunks Meteoric MD said:**

*"We learnt a great deal about Palm Springs from last year's highly successful maiden drill program, in particular that gold mineralisation is stratabound within a single thick syenite unit and that the highest grade and thickest parts of the orebody occur within the hinge zone of a regional scale anticlinal fold hinge forming a robust high-grade zone that plunges shallowly southeast."*

*"Our 2021 drilling program was designed to further improve our confidence in the spatial distribution of the high-grade zone and further extend this zone down plunge to potentially grow the current gold resource inventory."*

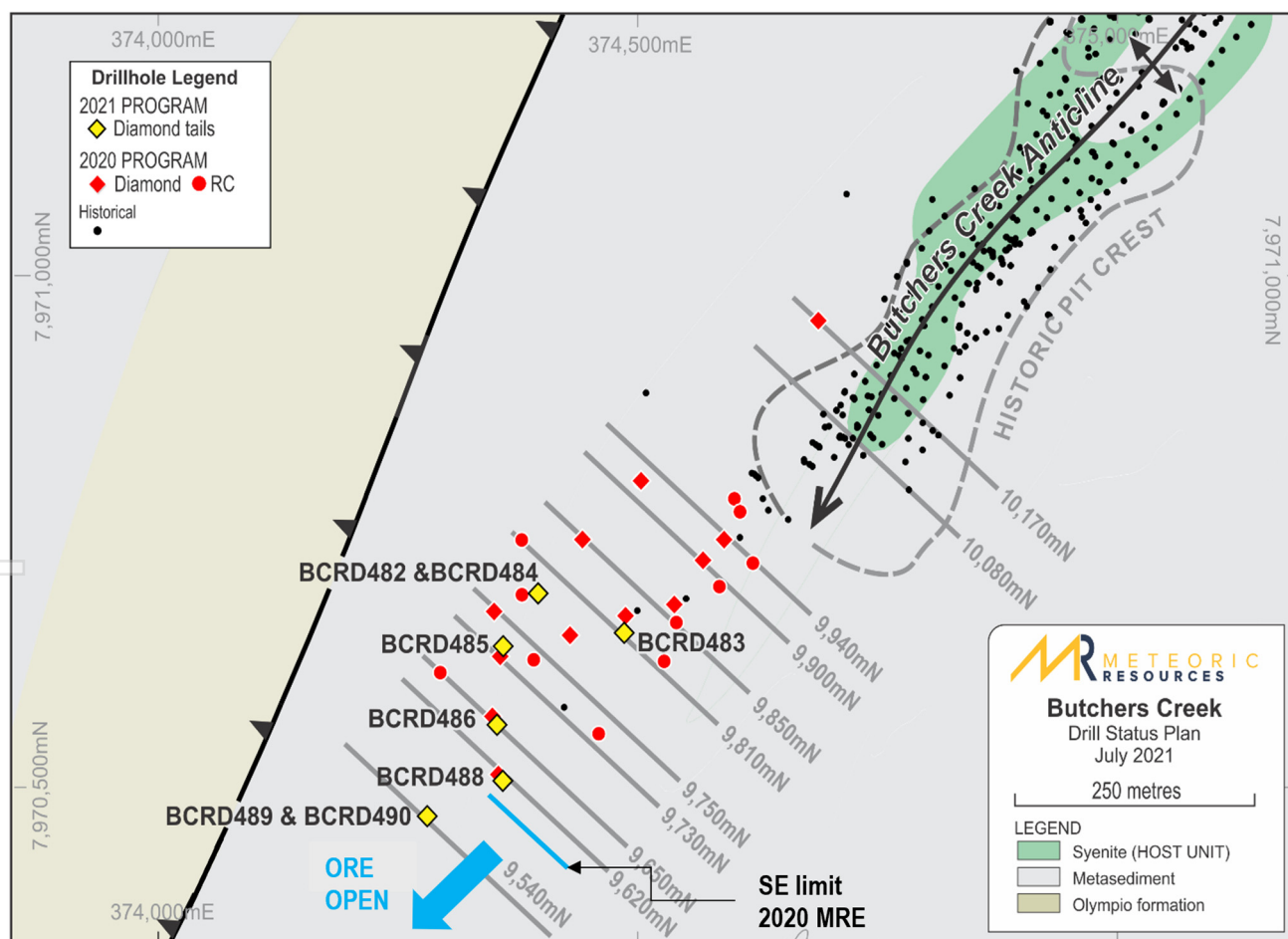
The best results we achieved in 2020 came from the anticlinal hinge zone, such as BCRD 467 that intercepted 69m @ 4.38 g/t Au. The presence of visual gold in BCRD484 confirms the presence of the high-grade core within the anticline and it is gratifying to get immediate validation in the drilling. Excitingly, there are more intersections into the anticlinal hinge zone to come from the balance of the Diamond tails. In addition, I am delighted that the altered syenite observed in BCRD 489 and 490 confirm that the mineralisation extends and remains open south of the current resource at Butchers Creek.

"Finally, kudos to the site team who have worked diligently since the acquisition of the project, building relationships with the Traditional Owners and their representatives to facilitate the requisite Heritage approvals to begin exploring the exploration leases surrounding the Butchers Creek mining licenses. We firmly believe that there is real opportunity for us to make further significant discoveries at Palm Springs in these areas."

## 2021 Drilling Program

Meteoric's 2021 drilling campaign at Palm Springs is designed to increase confidence in the current MRE (5.2Mt @ 1.9g/t Au [319,000 oz]) and extend the resource 200m down plunge to the south-west.

The Company is undertaking a 4,000m drill program comprising 7 RC pre-collars with diamond tails and 1 diamond tail as re-entry of BCRC482 from the 2020 drill campaign (Figure 1 & Table 2). 5 diamond tails have been completed with assays due later this month. RC pre-collars are completed for the balance of the drillholes with the diamond tails will be completed this month.



**Figure 1.** Project geology and collar plan showing historic drill holes and 2020 & 2021 programs of MEI.

Blue line shows SE limit of 2020 MRE. Solid blue arrow shows direction of fold plunge and still open orebody.

## Details of Drilling and Mineralisation

Mineralisation continues to be stratabound within an intermediate intrusive unit - syenite. This syenite was previously described as a trachyte in Company releases, (ASX:MEI 10/09/2020, 02/11/2020 & 30/11/2020) however petrology examination has confirmed the syenite description.. The localisation of alteration, including intense sulfidation and related gold mineralisation within the syenite appears to be related to a rheology contrast between the syenite and the surrounding sedimentary rocks, with the syenite deforming in a brittle manner allowing veining, fracturing and alteration to concentrate there.

Thick zones of syenite were intersected within the anticlinal fold hinge in holes BCRD483, BCRD 484 (Figure 2), and BCRD489 (Figure 3). The syenite is generally strongly albitised with abundant quartz + carbonate + chlorite veins and localized sulphide veinlets and alteration haloes containing pyrite > pyrrhotite >> arsenopyrite. The best mineralised intercepts from 2020 drilling also exhibited strong albite alteration and abundant sulphides. In addition, recent petrological investigation clearly show the gold is related to the sulphides present in the syenite with gold occurring dominantly as inclusions within pyrite and pyrrhotite.

### Section 9780mN (BCRD482 & 484 and Figures 1 & 2)

Drilling on Section 9780mN is designed to confirm continuity of the Hinge Zone intersected 40m south in BCRC475 (45m @ 2.54g/t Au from 259m - ASX:MEI 15/06/2020). BCRD484 successfully achieved this, intersecting a 79m thick zone of syenite in the hinge region (Figure 2). BCRD482 was drilled below this and encouragingly intersected syenite with strong veining and alteration on both limbs of the fold with assays still pending.

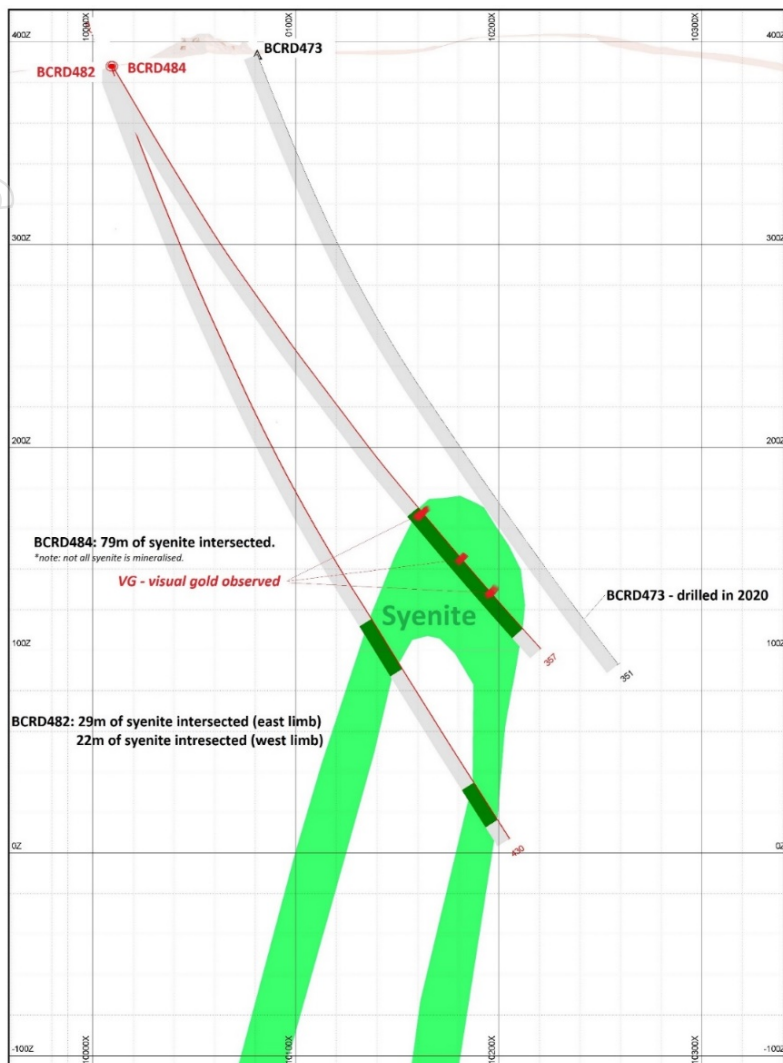
Encouragingly, visible gold was observed at three (3) intervals in BCRD484 in strongly altered syenite with abundant quartz carbonate veins at: 268.5m, 302.8m, and 318.3m (Table 1). Visible gold grains up to a maximum of 3mm in diameter are observed in narrow veins up to 50mm thick of blocky quartz with carbonate and chlorite (Photos 1 & 2). These have pyrite, pyrrhotite and arsenopyrite as veinlets and alteration haloes with total sulphide content up to 20%. Similar zones observed in reported holes last year coincided with extremely high-grade results. Hole BCRD467 returned 69m @ 4.38g/t Au (where VG was noted 5 times) and BCRD468 returned 55m @ 3.21 g/t Au (a single occurrence of VG) (ASX: 30/11/2020).

Note: With respect to any visible gold or visual indications observed in drill holes, it must be cautioned that visual observation and estimates are non-quantitative in nature and should not be taken as a substitute for appropriate laboratory analysis. Laboratory analysis results will be provided for BCRD484 when they are received and interpreted.

**Table 1.** Visible Gold occurrences noted in BCRD484.

BCRD484
<b>268 – 268m</b> - Shallow angle blocky QV, with black clouds (chlorite alteration), carb crystals fully formed. Matrix around QV coarse grained syenite heavily albite altered. Minor amounts of anhedral sphalerite.
<b>302.8m</b> - Cloudy blocky QV, finely dissemination Au, near coarse grained Syenite, with significant Albitisation and chlorite alteration. Au, combined with anhedral pyrite.
<b>318.3m</b> - Blocky, cloudy QV with significant chlorite alteration, coarse grained Syenite matrix, heavily albite altered. Nearby anhedral sphalerite.





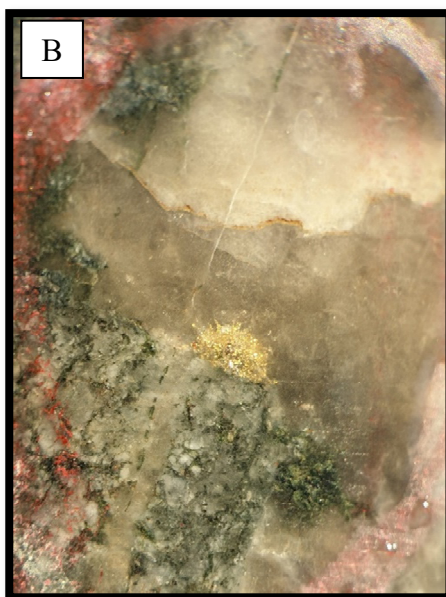
**Figure 2.** Cross section 9780mN showing continued thick syenite intersection through the Hinge Zone in BCRD484 with location of visible gold occurrences marked in red.



**Photo 1a.** BCRD484 268 – 269m - Shallow angle blocky QV, with black clouds (chlorite alteration). Matrix around QV is coarse grained syenite, heavily albite altered. Minor amounts of anhedral sphalerite.

**Photo 1b.** Close up of gold grain.

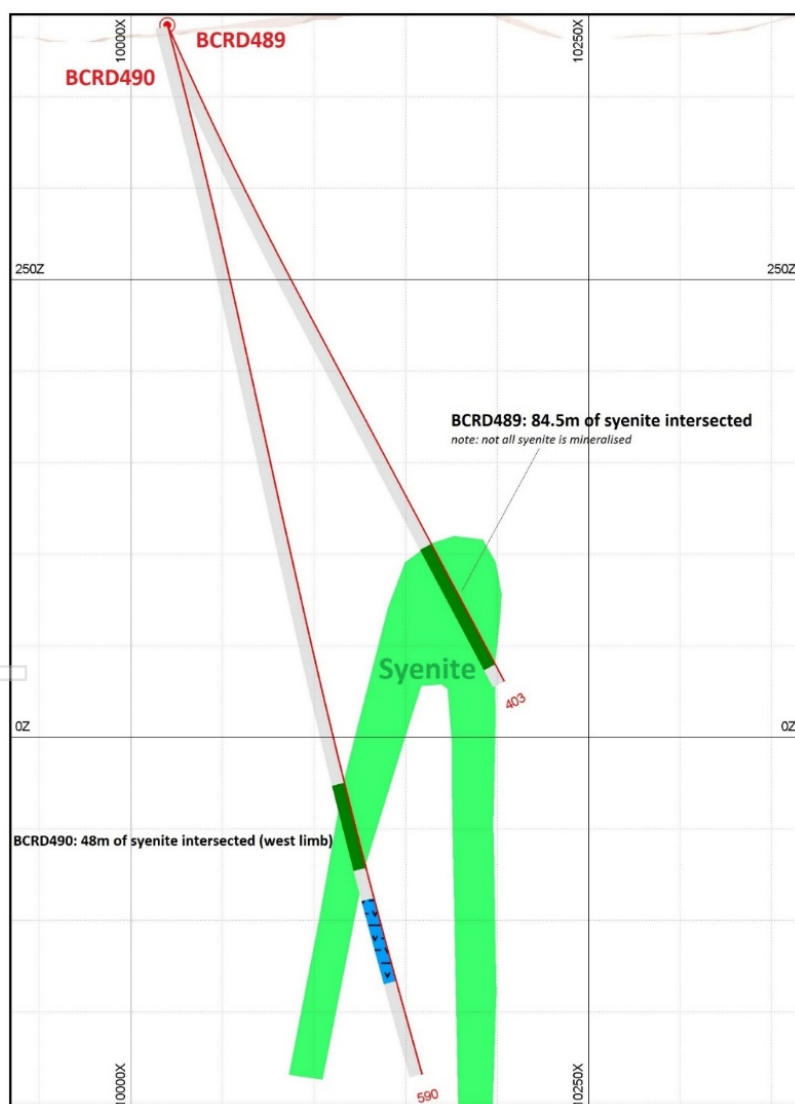
Red Circles highlight the VG.



**Photo 2a.** BCRD484 302.8m - Cloudy blocky QV, finely disseminated Au, near coarse grained Syenite, with significant albitisation and chlorite alteration. Au, combined with anhedral pyrite.

**Photo 2b.** Close up of gold grain.

Red Circles highlight the VG.



**Figure 3.** Cross section 9540mN showing continued thick syenite intersection through the Hinge Zone in BCRD489, 80m south of previous drilling.

## Section 9540mN (BCRD489 & 490 and Figures 1 & 3)

Drilling on Section 9540mN (80m south of existing drilling) extended mineralisation to the south of the existing resource estimate. BCRD489 intersected an 84.5m thick zone of syenite in the hinge region of the anticline as modelled (Figure 3). BCRD490 was drilled below this and intersected a significant 48m width of syenite.

## Heritage Impact Assessment Meeting

The Company attended a successful meeting in Halls Creek on 12 July with a representative from the Kimberley Land Council and members of the Koongie-Elvire (Traditional Owners). Meteoric presented its proposed 2021-2022 Exploration Programs on the exploration tenements surrounding the Butchers Creek mining licenses to the group. The Company received approval to commence work on activities not related to any ground disturbance, including mapping and rock chipping, an aerial survey and several ground IP surveys. A Heritage Survey to review proposed drilling sites is planned for the coming months.

**Table 2.** Butchers Creek 2021 drill hole and collar information.

Section	Hole ID	Hole Type	Easting	Northing	RL	Dip	Azi	RC Depth	DD Interval	Current Depth	Proposed Depth
9810m N	BCRD483	RCD	374491	7970653	394	-73	123	258	0	258	300
<b>9780mN</b>	<b>BCRD482</b>	<b>RCD</b>	<b>374388</b>	<b>7970691</b>	<b>388</b>	<b>-69</b>	<b>118</b>	<b>318</b>	<b>112</b>	<b>430</b>	<b>430</b>
<b>9780m N</b>	<b>BCRD484</b>	<b>RCD</b>	<b>374389</b>	<b>7970691</b>	<b>388</b>	<b>-58</b>	<b>122</b>	<b>251</b>	<b>106</b>	<b>357</b>	<b>357</b>
9710m N	BCRD485	RCD	374357	7970627	387	-61	122	250	0	250	400
9660m N	BCRD486	RCD	374345	7970575	387	-66	125	180	32	212	390
9615m N	BCRD488	RCD	374344	7970521	389	-70	125	234	126	234	360
<b>9535m N</b>	<b>BCRD489</b>	<b>RCD</b>	<b>374258</b>	<b>7970483</b>	<b>389</b>	<b>-66</b>	<b>122</b>	<b>163</b>	<b>240</b>	<b>403</b>	<b>403</b>
<b>9535m N</b>	<b>BCRD490</b>	<b>RCD</b>	<b>374258</b>	<b>7970483</b>	<b>389</b>	<b>-75</b>	<b>122</b>	<b>300</b>	<b>290</b>	<b>590</b>	<b>590</b>
								<b>1,954 m</b>	<b>906 m</b>		

\*Geographic Datum is GDA94, Zone 52 South

**bold text** denotes DD tail is completed.

### Competent Person Statement

The information in this announcement that relates to exploration results is based on information reviewed, collated and fairly represented by Mr Peter Sheehan who is a Member of the Australasian Institute of Mining and Metallurgy and a consultant to Meteoric Resources NL. Mr Sheehan has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which has been 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 Sheehan consents to the inclusion in this report of the matters based on this information in the form and context in which it appears. Additionally, Mr Sheehan confirms that the entity is not aware of any new information or data that materially affects the information contained in the ASX releases referred to in this report.

This announcement has been authorised for release by the Board.

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## Appendix 1 - JORC Code, 2012 Edition Table 1

### Section 1 Sampling Techniques and Data

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

Criteria	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>REVERSE CIRCULATION (RC) drilling was used to obtain 1 m samples from which 3-5 kg was split out, then sent to the laboratories to be pulverised to produce a 50 g charge for fire assay.</li> <li>DIAMOND CORE (DD) drilling was used to obtain 1 m samples from which 3-5 kg was cut, then sent to the laboratories to be pulverised to produce a 50 g charge for fire assay.</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>RC drilling was carried out using a McCulloch DR950 with 3.5' rods and a 5.7/8' face sampling hammer.</li> <li>DD drilling was completed using a McCulloch DR950 drilling rig which produced HQ3 diameter core.</li> <li>The core was oriented using the TruCore UPIX tool and structural measurements were collected in zones of mineralisation and/or zones of interest.</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>Core loss is systematically measured and recorded by the Field Technician when the core is received from the rig. Additionally, it is often recorded by the Geologist in the Comments section of the summary logging sheets. Core recovery was excellent with &gt;98% recoveries in fresh rock.</li> <li>The condition of RC drill chips are recorded in the Comments section of the sample sheets if there was 'wet sample' or 'no sample' return. To (2) holes experienced excessive water and were abandoned (at &gt;300m depth). Only the last 2-3 metres returned 'wet' samples.</li> <li>The utilisation of a high capacity RC drill rig (listed above) ensures recoveries are maximized in the deep RC drilling.</li> <li>No relationship (positive or negative) was observed between recovery and gold grade. There is no reason to believe any sample bias has been introduced as a result of the recovered sample fraction.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>RC drill holes were geologically logged on 1m intervals and in sufficient detail to support descriptions of rock types and mineralisation presented in the Announcement above.</li> <li>DD drill holes were logged based on lithology/alteration boundaries and in sufficient detail to support descriptions of rock types and mineralisation presented in the Announcement above.</li> <li>Logging is qualitative in nature recording: oxidation, texture, rock type, structure type and alpha angles, alteration type and intensity, sulphide type and percentages.</li> <li>All DD and RC drill holes were logged in their entirety for the 2020 drilling program.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>DD Core for sampling was systematically sawed in half (using a cut line as a reference) and Half Core was generally submitted to the laboratory for analysis. The same side of the cut line was submitted for analysis to maximise representivity. Where Duplicate samples were required, the half core was sawed in half again and quarter core for the relevant interval was submitted to the laboratory for analysis.</li> <li>RC chips were split by individual metre at the drill rig into 3-5kg sub samples using a cone splitter.</li> <li>Both sampling methods are considered appropriate for Au determination given the sample size and are supported by Standard Industry practices.</li> </ul>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>Analysis was carried out by Australian Laboratory Services (Perth, WA), an accredited Laboratory, namely. Au determination was by Fire Assay (50g charge).</li> <li>No additional methods or tools for sampling are considered in the text.</li> <li>Quality control samples were inserted every 20 samples with a mixture of standards, blanks and duplicates. For RC a duplicate sample was taken from the cone splitter. For DD where quarter core was sampled, quarter core was submitted as a duplicate sample. Where half core was sampled, quarter core was submitted as a duplicate sample. Where whole core was sampled, no duplicate samples were submitted.</li> </ul>

Criteria	Commentary
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li>Significant intersections in the above announcement were cross checked by site geologists by revisiting the individual chip trays or diamond drill core and making a visual comparison of observed alteration with reported gold grades, and/or against recorded drill hole logs.</li> <li>Significant intersections in historic drill holes in the area of the existing pit were supported by grade control drilling. The author is encouraged by reported recovered mill reconciled grades of 2.09g/t Au versus a stated resource grade of 2.10g/t Au. While this is not definitive it does lend weight to accurate drilling grades.</li> <li>Several historic RC holes (BCRC*) were twinned by historic diamond holes (BCD*). For several holes both grade and intersection width varied significantly. This will be followed up in subsequent work.</li> <li>MEI completed several twin drill holes of historic drill holes in the 2020 drilling program with results and geostatistics to be reported upon when complete (upon receipt of all outstanding assays).</li> <li>Drill hole information was recorded on a combination of paper logs and excel spreadsheets in the field, then transferred into an access database at the completion of the program. Data checks are run by Project manager subsequent to loading the data looking for incomplete or incorrect intervals in the database.</li> <li>Assay data has not been adjusted.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>Drill hole collars have been picked up with a handheld GPS and recorded using MGA94 datum.</li> <li>MNG Survey based in Kununurra provided survey control for the drill program and all 2020 drill hole collars will be picked up using a DGPS using MGA.</li> <li>Current topographic control (20m contours) plus collar pickups are considered adequate as a basis for the design and reporting of exploration drilling.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>Drill spacing over the historical resource at Butchers Creek is generally 40m between collars, drilled on sections 20m apart.</li> <li>Drill spacing for 2021 program is up to 80m between collars, drilled on sections 40m-50m apart.</li> <li>The drill spacing is considered sufficient to support exploration results.</li> <li>No compositing has been applied to exploration results.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>Mapping of the pit floor and walls during open cut mining by PMA identified a complex vein system. The structural orientation of mineralized vein system at Mt Bradley is poorly understood. All MEI's 2021 DD holes were orientated with structural and lithological data recorded in the logging to better understand any veining.</li> <li>The drill orientation for all holes at Mt Bradley is dominantly at right angles to the strike of the stratigraphy but not necessarily the vein array. The majority of holes at Butchers Creek are angled with an easterly drill azimuth, which is optimal to test both steep and shallow west dipping mineralisation. Several vertical holes are shown on section.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>All sampling of MEI's 2021 drilling program was supervised and carried out by experienced geologist and technician. Both RC and DD samples were bagged in calico bags onsite, with 4 calico's bags containing samples were transferred into a poly-weave bag and then into a large bulka bag for transport via road from Halls Creek to ALS in Perth using a reputable transport company.</li> <li>The security of the sampling process is considered to be appropriate by the author.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>No audits or reviews have been conducted on the project.</li> </ul>



## Section 2 Reporting of Exploration Results

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

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>Shown in Appendix 2.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>A Low-Level aerial Magnetic-Radiometric survey was flown over 30% of the project area in Dec 1996.</li> <li>Southern Geoscience completed a litho-structural analysis of the aeromagnetic and identified 16 exploration targets for gold mineralisation.</li> <li>Two regional stream sediment surveys were completed Geochemex (1996) and Stockdale (1997) and 440 sites sampled.</li> <li>PMA completed infill stream sediment sampling of 16 target areas and three high priority areas were identified.</li> <li>Prior to Meteoric, there hasn't been any systematic exploration or drilling of these tenements since mine closure in June 1997.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>The project is located within the Halls Creek Mobile Zone and includes numerous gold occurrences, the majority of which are associated with quartz vein systems developed within anticlinal hinges and adjacent to fault zones. The Butchers Creek mine sequence is composed of Lower Proterozoic turbiditic sediments, and intrusive syenites of the Olympio Formation, Butchers Ck Member and basic sills and dykes, which are tightly folded and metamorphosed to greenschist facies.</li> <li>Mineralisation is associated with the quartz vein arrays associated with the brittle deformation of massive syenite, particularly where its highly altered, with a high sulphide occurrence.</li> <li>Gold mineralisation is associated with anticlinal fold hinges, which plunges at 20-30degrees to the south from the southern limit of the open cut. The folded syenite is within a tightly folded overturned anticline, with the western limb dipping 70 west and eastern limb dipping 85 degrees west dipping, beside a major north trending regional shear zone.</li> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li>Provided in Table 1 of main report.</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>Mineralised Intercepts provided are uncut, have a minimum width of 2m, use a lower-cut 0.5g/t Au, and allow a maximum of 2m internal dilution.</li> <li>Generally, where &gt;75% of the contained metal for an intercept is contained within &lt;25% of the width, short lengths with high-grades are reported as "including..."</li> <li>No Metal Equivalents are used.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>All assay intervals are down hole intersections, the true width isn't reported.</li> <li>The drill orientation for reported holes is dominantly at right angles to the strike of the stratigraphy, but not necessarily the vein array. The majority of holes at Butchers Creek are angled with an easterly drill azimuth, which is optimal to test both steep and shallow west dipping mineralisation. Several vertical holes are shown on section.</li> <li>Mineralisation is interpreted to dip 70°-80° towards the (grid) west, drilling is generally oriented 60°-80° to (grid) east. Therefore, true widths are likely to be ~25% narrower than reported downhole widths.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>Refer to body of the announcement for Cross-Sections and Drill Collar plots.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>Mineralised Intercepts for all drill holes reported in the above report are presented in the Appendices.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>There is no other substantive exploration data that is meaningful and material to the current Release.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>Refer to the body of announcement.</li> </ul>

## Appendix 2 – Palm Springs Project Tenement Summary

Tenement	Type	MEI %	Area (Ha)
M80/106	Mining Lease	97%	38.8
M80/315	Mining Lease	97%	511.6
M80/418	Mining Lease	100%	6.8
E80/4856	Exploration Licence	100%	4200.0
E80/4874	Exploration Licence	100%	1100.0
E80/4976	Exploration Licence	100%	1780.0
E80/5059	Exploration Licence	100%	5000.0
P80/1766	Prospecting Licence	100%	120.0
P80/1768	Prospecting Licence	100%	120.0
P80/1839	Prospecting Licence	100%	5.8
P80/1854	Prospecting Licence	100%	8.0
P80/1855	Prospecting Licence	100%	44.0

**Table 3.** Global Mineral Resource Estimate for the Palm Springs Gold Project (ASX release 3/6/2021)

Deposit	Lower Cut-off (g/t)	Resource Classification	Tonnes (Mt)	Gold Grade (g/t)	Contained Gold (oz)
Butchers Creek	0.8	Indicated	1.9	2.2	139,000
	0.8	Inferred	3.3	1.7	180,000
<b>Sub-total</b>		<b>Ind + Inf</b>	<b>5.2</b>	<b>1.9</b>	<b>319,000</b>
Golden Crown	0.8	Inferred	0.4	3.1	38,000
<b>PSPG Global Resource</b>			<b>5.6</b>	<b>2.0</b>	<b>357,000</b>

Note: Figures may not add up due to rounding. The Company confirms that all material assumptions and technical parameters underpinning the Mineral Resources and Ore Reserves continue to apply and have not materially changed. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous announcements.