

ASX Announcement
30 October 2017

Discovery of thick conglomerates and gold nuggets confirms potential of 12 km target

ASX Code DEG
FRA Code WKN 633879
ABN 65 094 206 292

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Highlights

Pitted and flattened gold nuggets confirm two new conglomerate discoveries - Jarret Well and Steel Well - within 12km target area and separate from Loudens Patch.

Highly prospective pyrite bearing lower conglomerate bed appears similar to gold bearing rocks reported at Purdy's Reward (Novo/Artemis) near Karratha.

Conglomerates interpreted to be same unit providing over 2.5km of continuous strike length based on geophysical and aerial photography interpretation. Unit remains open to the north and dipping beneath Mount Roe Basalt.

Mapping and metal detecting along the zone remains limited - less than 10% of 12km zone has been metal detected.

Jarret Well Conglomerate

- Gold nuggets (3) discovered within and immediately adjacent to the lowermost ferruginous conglomerate bed.
- Above this lower conglomerate is a sequence of thicker and massive mafic sands/siltstones transgressing into an upper coarse polymict conglomerate.
- Mapped 300m strike length, shallow dipping, up to 50m thick and open along strike under basalt and scree material.

Steel Well Conglomerate

- Gold nuggets (3) discovered 500m south of outcropping Steel Well Conglomerate.
- 60m to 80m thick sequence mapped over a 900m strike length, moderate dipping and open along strike under basalt and scree material.

“Our geological team understood the significance of Novo/Artemis’s activities earlier than most and moved rapidly to the initial Loudens Patch discovery. They have now made more exciting new discoveries of highly prospective conglomerates with associated gold nuggets. The scale of this 12km zone could dwarf Loudens Patch.

Ongoing detailed mapping, metal detecting and geochem sampling are underway and we are commencing heritage clearance activities as we push forward to defining drill targets.

We are also looking forward to commencing drilling at the high grade Toweranna and Blue Moon prospects shortly.” commented Executive Chairman, Simon Lill.

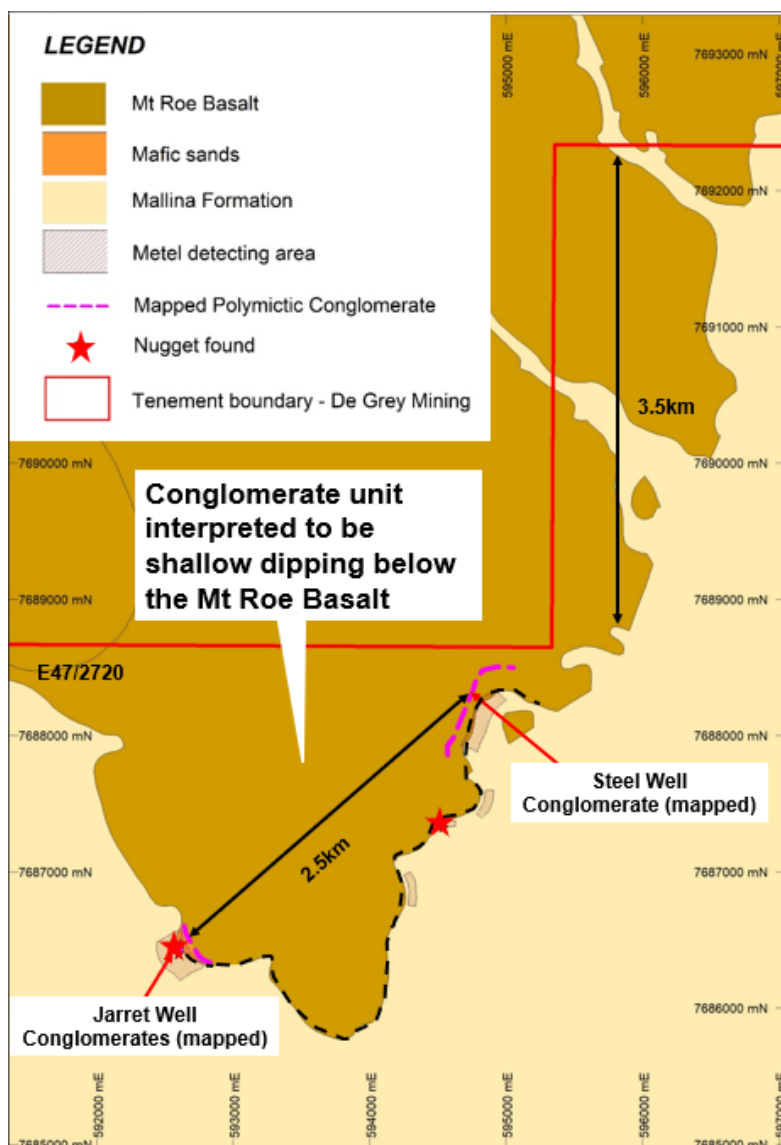
De Grey Mining Limited (ASX: DEG, “De Grey”, “Company”) is pleased to report the discovery of two prospects where highly prospective conglomerate units have been mapped and associated gold nuggets have been found by De Grey personnel.

This new conglomerate horizon beneath the previously reported 12km zone of Mt Roe Basalt significantly expands De Grey’s footprint for Conglomerate Gold style mineralisation within the Pilbara Gold Project.

The prospective conglomerate beds were recognised during reconnaissance geological mapping and associated gold nuggets found with subsequent metal detecting. The conglomerates are interpreted to form a large and continuous unit some 20-50m thick, shallowly dipping beneath the Mt Roe Basalt (ASX release “12km of Witwatersrand conglomerate target identified”, dated 23 August 2017). The prospective area beneath the Mt Roe Basalt represents an area of approximately 10km² within E47/2720 (Fig 1).

Further detailed mapping, metal detecting and geochemical sampling continues to progress around the margins of the Mt Roe Basalt where the basal conglomerate horizon is predicted to outcrop if not covered by scree material from the Mt Roe Basalt.

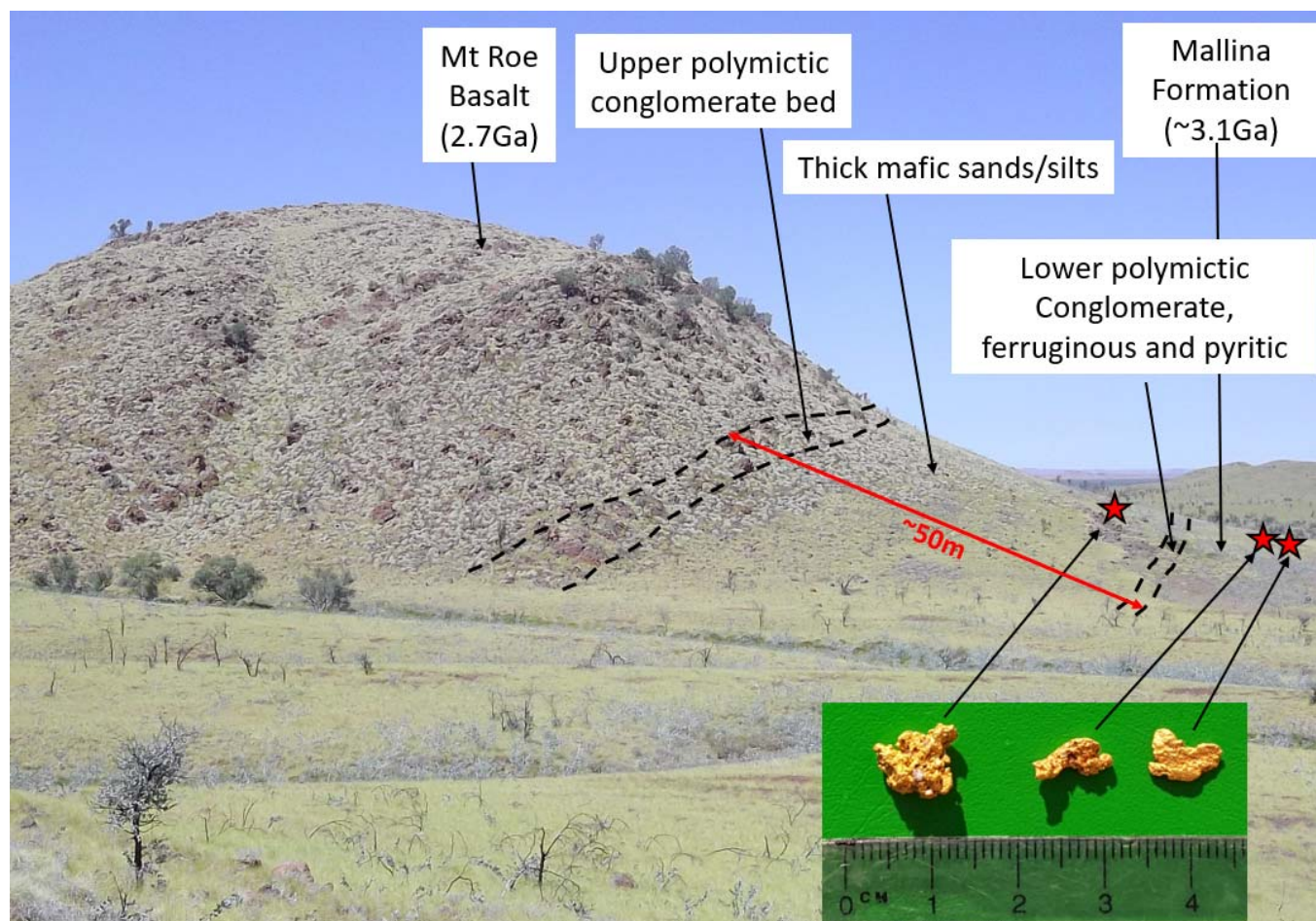
Figure 1 New Conglomerate Gold Targets (E47/2720)



Jarret Well Conglomerate

At Jarret Well, outcrop of the conglomerate unit has been mapped along surface for approximately 300m with the northern end dipping below shallow alluvium south of the Mallina Shear Zone. The southern end disappears under Mt Roe Basalt scree slope debris which covers the conglomerate in many areas along strike throughout the area. The overall true thickness of the conglomerate and mafic sands unit is approximately 50m and gently dipping between 10-15° to the northeast (Fig 2).

Figure 2 Panoramic view looking southwest towards Jarret Well Conglomerate.



The Jarret Well Conglomerate unit lies unconformably on top of the older Archaean basement Mallina Formation. The Mallina Formation hosts De Grey's current 1.2Moz gold resources. At the base of the Jarret Well Conglomerate sequence is a thin conglomerate bed approximately 2-3m thick comprising predominantly sedimentary rock clasts with minor mafic volcanics and rare quartz pebbles. This lower conglomerate is ferruginous in nature to gossanous in places with up to 5% sub-rounded to euhedral limonite and hematite (after pyrite) crystals up to 8mm resembling buckshot pyrite. This lower conglomerate bed is correlated to the same stratigraphic position as the gold-bearing conglomerates at Novo/Artemis Purdy's Reward and De Grey's Loudens Patch. Three nuggets were found immediately within and down slope from this unit and supports the prospectivity of the conglomerate unit.

Above the lower conglomerate is a relatively thick sequence of very fine-grained mafic material which is interpreted as mafic sedimentary sands and silts approximately 30-35m thick. This unit and the lower conglomerate have only subdued outcrops making it difficult to sample and map in detail. One of the gold nuggets was found towards the base of this mafic rich unit, suggesting this unit may host gold mineralization (Figures 3 to 5).

Figure 3 Jarret Well lower conglomerate showing ferruginous matrix after pyrite.



The upper polymictic conglomerate bed ranges in thickness from 5m to 10m and comprises sub to well-rounded cobbles of basalt, granite and intermediate to ultramafic volcanic rocks and minor quartz in a strongly silicified, limonitic matrix with sub-rounded limonite and hematite cubes after pyrite (buckshot pyrite).

Figure 4 Jarret Well gold nuggets showing pitted nature where sand grains have been imprinted during burial.

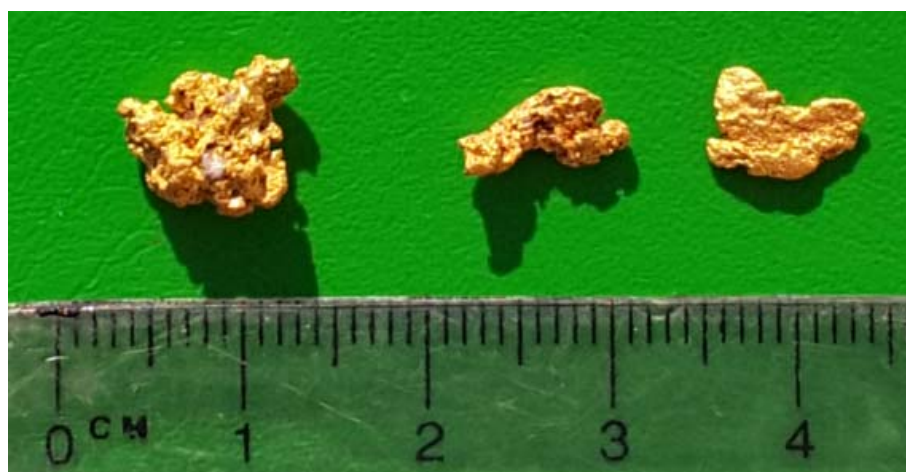


Figure 5 Jarret Well upper conglomerate in outcrop (left) and cut hand specimen (right) showing rounded to angular volcanic clasts and fine matrix with minor pyrite and limonite and hematite after pyrite.



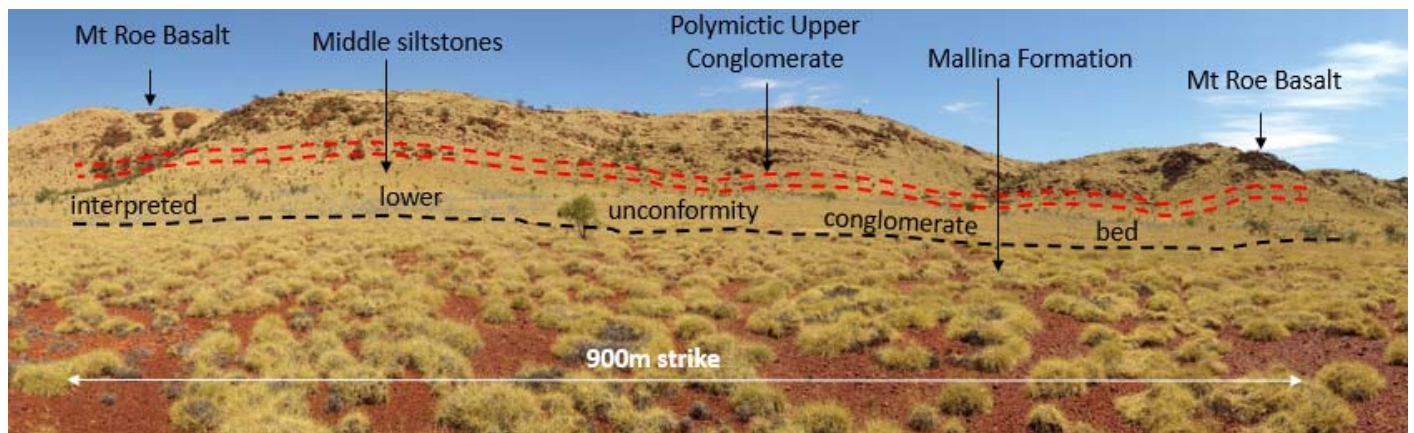
Steel Well Conglomerate

The Steel Well conglomerate was identified during reconnaissance mapping and sampling along the east side of the 12km Mt Roe Basalt. The conglomerate has been mapped over a 900m north-south strike length with the northern and southern ends disappearing under Mt Roe Basalt scree slope debris. The overall thickness of the conglomerate sequence ranges from approximately 60-80m.

The lower portion of the conglomerate sequence has not been observed against the older Mallina Formation. The lowest portion of the sequence is interpreted to be a variably thick unit of mafic rich sands or basalt (petrology awaited to determine origin). Above this unit is a black quartzite approximately 1m thick followed by a feldspathic porphyritic basalt up to 10-20m thick.

Overlying, the basalt is a thin horizon of fine pebble to cobble conglomerate which grades into a sequence of fine siltstones up to 2-3m thick, showing laminations, cross bedding and ripples, suggesting a generally low energy shoreline marine environment (Figure 6).

Figure 6 Panoramic view of Steel Well Conglomerate looking west.



The upper conglomerate consists of angular to well-rounded clasts of greywacke, siltstone, granite, mafic to ultramafic volcanics and rare quartz in a strongly silicified, limonitic matrix. Laterally the conglomerate unit is much finer grained at the northern end comprising ferruginous pebble beds (approx. 3m thick) interbedded with siltstone and sandstone dipping 30° to 40° to the northwest. At the southern end of the mapped area the thicker and more massive upper conglomerate beds contain well rounded boulders of basalt and granite up to 1m diameter, suggesting a very high energy depositional environment (Figures 7 to 10).

Figure 7 Steel Well - Coarse-grained, massive upper conglomerate at the southern end of mapped area.



Figure 8 Typical upper Steel Well Conglomerate showing angular to rounded clasts of sedimentary rock and mafic volcanic rocks and rounded, up to 5mm clasts of cherry-red hematite after pyrite (buckshot pyrite)

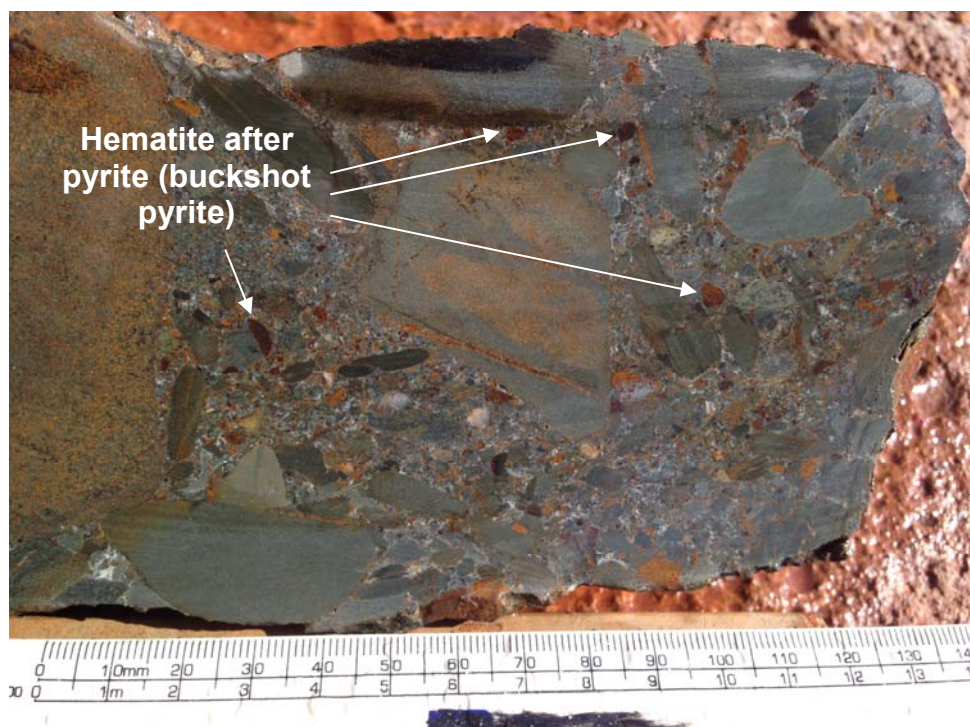


Figure 9 Ferruginous upper pebble conglomerate with minor sandstone interbeds outcropping at the northern end of the mapped area.



Figure 10 Siltstone and sandstone showing laminations, cross bedding and ripples indicative of a low energy shoreline marine environment.



Gold Nuggets found 500m south of Steel Well

Waterworn, pitted and flattened nuggets (3) have also been found 500m south and along strike of the mapped Steel Well conglomerate bed less than 20m from the foot of the Mt Roe Basalt where the interpreted lower conglomerate unconformably overlies the Mallina Formation. This further suggests the lower conglomerate bed is present in this area but not outcropping and buried under the Mt Roe Basalt and scree slope debris. Hence this area is also prospective and potentially gold-bearing

Figure 11 Waterworn gold nuggets found 500m south of Steel Well Conglomerate.

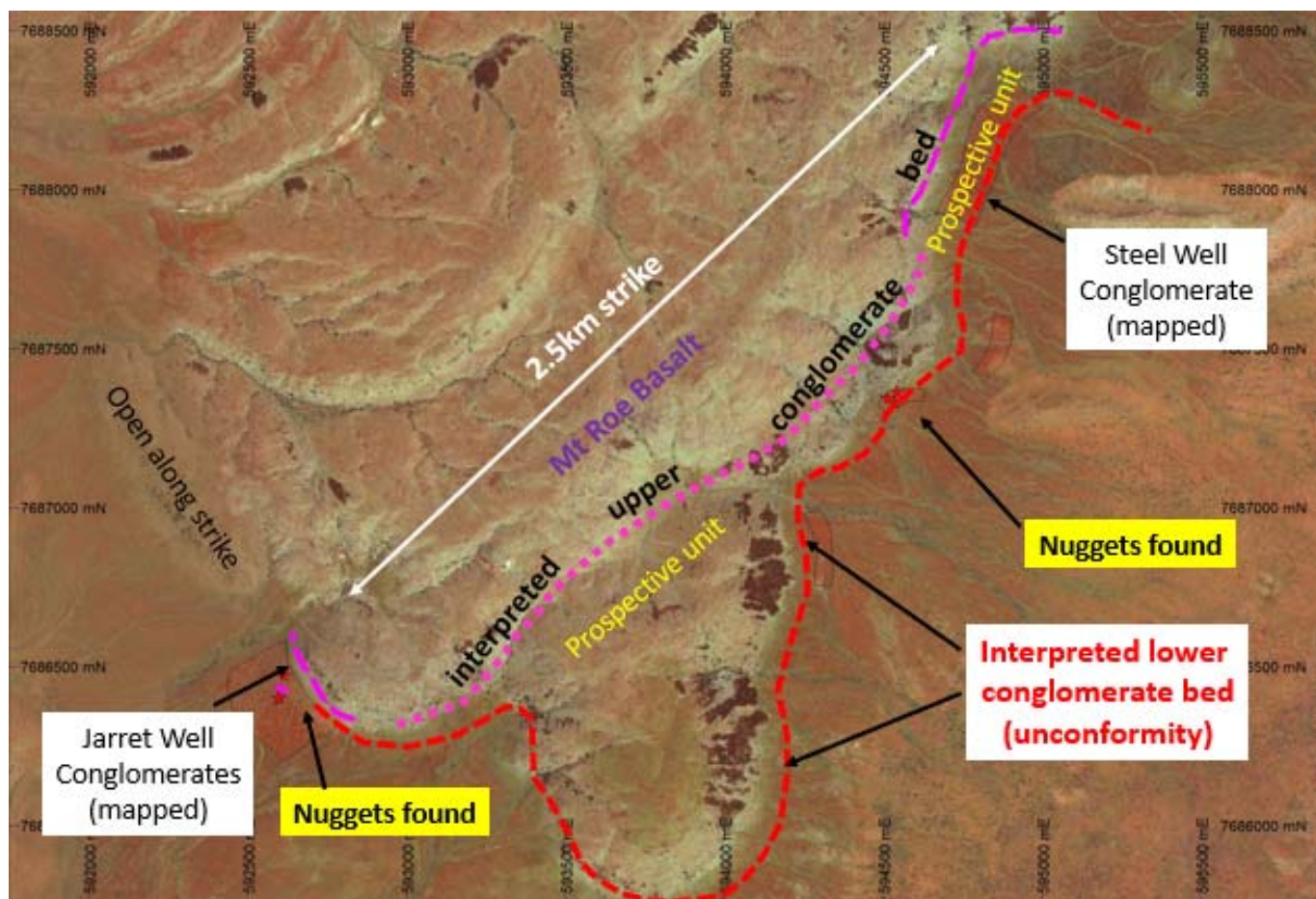


Interpretation

Interpretation of mapping, geophysics data and aerial photography indicates the Jarret Well and Steel Well Conglomerates represent the same large and continuous unit some 50-80m thick, shallowly dipping beneath the Mt Roe Basalt. This provides a continuous target over 2.5km in strike length and with considerable thickness. The prospective area beneath the Mt Roe Basalt represents an area of approximately 10km² providing a large down dip target.

To date mapping along the eastern margin of the Mt Roe Basalt, north of Steel Well, has been very limited. Further work will be undertaken to explore outcrops in the gorges with the aim of extending the conglomerate beyond the current 2.5km strike. Further metal detecting will also be undertaken in addition to more detailed mapping to locate the lower polymictic conglomerate unconformity overlying the Mallina Formation (Figures 1 and 12).

Figure 12 Interpreted 2.5km shallow dipping Conglomerate target.



Current programmes and Future Work

Reconnaissance geology mapping and metal detecting along the 12km Mt Roe Basalt target and at Loudens Patch has been successful in delineating two major conglomerate gold targets within E47/2720.

A programme of geochem sampling has commenced at both areas and includes rock chip sampling, orientation stream sediment and soil sampling to determine the best geochem methods to define future drill targets along the conglomerate beds. Particular emphasis will be placed on detailed mapping of the various sedimentary units within the overall conglomerate units, metal detecting and systematic soil sampling as an initial means to define the most prospective areas to focus further work, including drilling. Additional reconnaissance mapping to the north of Steel Well remains to be completed.

Background

On 24 January 2017, De Grey secured an option to acquire 100% of the Indee Gold Project by entering into an exclusive and binding Heads of Agreement. The tenement (E47/2720) on which the Loudens Patch, Jarret Well and Steel Well conglomerate targets reside remains subject to this option agreement whereby De Grey is required to pay a remaining total of \$14.9M to acquire the asset in its totality by July 24, 2018.

De Grey have recently announced a letter agreement (ASX 2 October 2017 “Settlement of Indee Transaction extended by up to 12 months”), to be formalised, whereby the payment referred above is extended through to 24 July 2019 with a non-refundable instalment of \$2M due on 24 July 2018.

For further information:

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COMPETENT PERSONS STATEMENT

The information in this report that relates to exploration results is based on, and fairly represents information and supporting documentation prepared by Mr. Michael Jackson, a Competent Person who is a Member of The Australian Institute of Geoscientists. Mr. Jackson is a consultant to De Grey Mining Limited. Mr. Jackson has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resource and Ore Reserves". Mr. Jackson consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

Table JORC Code, 2012 Edition

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (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. 	<ul style="list-style-type: none"> Gold nuggets have been found using a handheld metal detector and traversing the target areas. The traverse lines are approximately 50m apart and occur perpendicular and parallel to the conglomerate bed horizons. Detecting focused on the areas directly below the conglomerate beds. Once a metal detector signal is evident, the source of the signal was found by hand digging using a hand held pick. Nuggets were found at various depths ranging from 5-20cm in the soil and rock scree. The individual nugget locations were recorded with a hand held GPS and each has been plotted on a location plan. The gold samples remain to be tested for purity.
Drilling techniques	<ul style="list-style-type: none"> 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, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.). 	<ul style="list-style-type: none"> No drilling has been undertaken.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> No drilling has been undertaken
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> The nuggets were found in combination with geological mapping of the target area based on a prospective geological unit being mapped in the vicinity.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i> • <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> • <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> • <i>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.</i> • <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<ul style="list-style-type: none"> • The gold nuggets are not considered to be representative as the nuggets were found in loose rocks and soil near the prospective geological units. The geological units remain to be sampled in detail. • The proximity of the nuggets near the prospective geological units is a positive indication the prospective units is the source of the nuggets.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> • <i>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.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • No assay data or laboratory tests have been completed on the nuggets. • No assay data has been reported on geochem sampling.
Verification of sampling and assaying	<ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> • <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> • Due to the early stage of exploration and type of work completed to date, no verification nor assaying has been undertaken to date.
Location of data points	<ul style="list-style-type: none"> • <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i> • <i>Specification of the grid system used.</i> • <i>Quality and adequacy of topographic control.</i> 	<ul style="list-style-type: none"> • The accuracy of location is to approximately +/- 5m and was determined using a handheld GPS • Mapping and location was completed in GDA94 zone 50 projection. • There are no historic workings or drill collars on or near the areas reported.
Data spacing and distribution	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> • <i>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.</i> • <i>Whether sample compositing has been applied.</i> 	<ul style="list-style-type: none"> • Due to the early stage of exploration and type of work completed to date, the sampling is non-systematic nor representative for any future resource estimate.
Orientation of data in relation to	<ul style="list-style-type: none"> • <i>Whether the orientation of sampling achieves unbiased sampling of possible</i> 	<ul style="list-style-type: none"> • The metal detecting concentrated on areas below the mapped and interpreted

Criteria	JORC Code explanation	Commentary
geological structure	<p>structures and the extent to which this is known, considering the deposit type.</p> <ul style="list-style-type: none"> 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. 	<p>conglomerates to test if the conglomerate horizons are shedding gold nuggets.</p> <ul style="list-style-type: none"> Sporadic metal detecting has been undertaken along the 12km target zone however effectiveness has been restricted by thick spinifex cover. The deposit style is poorly understood and further detailed work is required before any conclusion on the mineralisation can be confirmed.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Geochem samples were collected by company personnel, placed in poly-weave bags and secured at the company's exploration camp.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> No audits have been completed.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area. 	<ul style="list-style-type: none"> The mapping and metal detecting was completed on E47/2720. The tenement is held by Indee Gold Pty Ltd, which De Grey mining has an option to purchase 100%. De Grey has the right to acquire Indee Gold for a total payment of \$15M by July 2018.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> No previous drilling or historic work is known within the immediate mapped area or along the Mt Roe Basalt within the tenement.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The mineralisation targeted is related to palaeo-placer conglomerate hosted gold. This style of mineralisation is poorly understood in the Pilbara region, however recent discoveries in the region have been noted and are currently being explored by third parties.
Drill hole Information	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	<ul style="list-style-type: none"> No drilling undertaken

Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul style="list-style-type: none"> <i>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.</i> <i>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.</i> <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i> 	<ul style="list-style-type: none"> Shallow nuggets have been found only. Due to the early stage of exploration and type of work completed to date, the sampling is non-systematic nor representative.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <i>These relationships are particularly important in the reporting of Exploration Results.</i> <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> <i>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').</i> 	<ul style="list-style-type: none"> Shallow nuggets have been found only. Due to the early stage of exploration and type of work completed to date, the sampling is non-systematic nor representative.
Diagrams	<ul style="list-style-type: none"> <i>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.</i> 	<ul style="list-style-type: none"> Maps and photographs of the area and geology are reported in the report.
Balanced reporting	<ul style="list-style-type: none"> <i>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.</i> 	<ul style="list-style-type: none"> Maps and photographs of the area and geology are reported in the report.
Other substantive exploration data	<ul style="list-style-type: none"> <i>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.</i> 	<ul style="list-style-type: none"> Maps and photographs of the area and geology are reported in the report and provide geological observations and interpretations as they are known to date.
Further work	<ul style="list-style-type: none"> <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<ul style="list-style-type: none"> Follow-up rock chip and soil sampling will be conducted once assay results have been received. Results of this work will be reported once all assays have been received. Further metal detecting is planned along the 12km conglomerate target zone. Results the metal detecting will be reported when the area has been tested. Mapping will be undertaken northeast of the currently known 2.5km target zone to locate strike extensions to the conglomerate.