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ASX Announcement

Drill results deliver exceptional uranium mineralisation at Koppies

- Phase 2 RAB drill program has identified exceptional uranium mineralisation at the Koppies tenement in Namibia, with the best intersections including:
 - o KP055 13 m at 905 ppm U₃O₈ from 3 m
 - Including 2 m at 4,504 ppm U₃O₈
 - KP045 10 m at 687 ppm U₃O₈ from 2 m
 - Including 2 m at 1,974 ppm U₃O₈
 - o KP012 7 m at 277 ppm U₃O₈ from 10 m
 - \circ KP047 5 m at 194 ppm U₃O₈ from 5 m and 2 m at 593 ppm U₃O₈ from 15 m
- A second high grade palaeochannel has been located over a 3.6 km length demonstrating further uranium mineralisation within the Koppies area
- Results confirm mineralisation in shallow drill holes less than 20 m in depth
- To date less than 5% of the highly prospective Koppies EPL has been explored, demonstrating the significant potential of the tenement
- Mineralisation is calcrete hosted within palaeochannels, the same style of ore used to develop Marenica's *U-pgrade*[™] uranium beneficiation process
- Expanded drilling program at Koppies to commence shortly

Marenica Energy Limited ("**Marenica**", the "**Company**") (**ASX:MEY**) is pleased to announce it has received assay results from its Phase 2 reconnaissance rotary air blast ("RAB") drilling program on exclusive prospecting licence ("EPL") 6987 in Namibia, Africa. EPL 6987, referred to as Koppies, is one of nine tenements that the Company has applied for in the Namib desert in recent years.

The exceptional interval of 2 m at 4,504 ppm U_3O_8 was contained within an intersection of 13 m at 905 ppm U_3O_8 from 3 m in hole KP055. The direction of the palaeochannel in this area is yet to be established, however, this will be the focus of the next drilling program expected to commence shortly.

Marenica Managing Director, Murray Hill, commented: "With such fantastic results, the Koppies story continues to develop, with excellent grades achieved from Phase 2 drilling, coupled with the discovery of a new highly mineralised palaeochannel at Koppies 2. We look forward to continuing to advance the project over the coming period with expanded drilling to commence shortly."

The location of the Koppies EPL relative to Marenica's other EPL's and nearby known calcrete deposits is shown in Figure 1 below.



Figure 1 – Location of Koppies in the Namib Desert, Namibia.

Eleven holes were drilled within a surface drainage stream (Koppies 2) approximately 2 km south of Koppies 1, with nine of the holes intersecting significant and continuous uranium mineralisation in a previously untested palaeochannel. The best Koppies 2 hole, KP045, intersected 10 m at 687 ppm U_3O_8 from 2 m, and included 2 m at 1,974 ppm U_3O_8 from 5 m. The uranium grades were also high in the eastern end of the channel, 5 m at 194 ppm U_3O_8 and 2 m at 593 ppm U_3O_8 in KP047.

The mineralisation at Koppies 2 appears to run the full width of the EPL, 3.6 km in this area. The mineralised channel appears to flow westwards from Marenica's EPL 7279, which borders Koppies to the east. This discovery increases the potential for mineralisation in EPL 7279.

The average thickness of the mineralisation at Koppies 1 is 7 m and 4 m at Koppies 2, with an average grade of the 1 m intersections >100 ppm U_3O_8 of 346 ppm U_3O_8 at Koppies 1, and 370 ppm U_3O_8 at Koppies 2.

In certain locations the mineralisation can reach a thickness of up to 13 m (KP055) and grade of up to 4,504 ppm U_3O_8 (KP055).

All palaeochannels intersected by drilling to date are mineralised, demonstrating that the area is prospective for calcrete hosted uranium deposits, and the exploration approach taken by Marenica has been successful. This approach will form the basis of the planned future exploration work.

Subsequent to completion of the Phase 1 drilling program, geophysical and geochemical surveys were undertaken in order to identify the morphology of palaeochannels in the vicinity of the drilling, with a number of different methods being tested and drilling was used to confirm the outcome.

Horizontal Loop Electromagnetic (HLEM), was trialled with a survey line along the drill line section in Figure 6. The HLEM results shown in Figure 7 confirm that this method was effective in identifying the palaeochannels. The results indicated that the palaeochannel is well defined, with bedrock ridges standing out, and the HLEM proved accurate in estimating the palaeochannel depth. The exploration to date has concluded that HLEM is the preferred future method for locating palaeochannels with its use expected to significantly improve future drill targeting.

Figure 2 shows the location of the drill holes at Koppies relative to Deep Yellow Limited (ASX:DYL) drill holes closest to the western boundary of Koppies.



Figure 2 – Location of Koppies drill holes relative to Deep Yellow Limited (ASX:DYL)

The Phase 2 drill program included RAB drill holes positioned in existing surface drainage streams, to test if these were underlain by palaeochannels. This approach resulted in the location of significant and continuous uranium mineralisation in Koppies 2. Palaeochannels were not identified in the drilling of two additional recent streams, however palaeochannels may not always be located directly beneath existing streams. The drilling does not discount the potential for channels in the areas drilled and HLEM surveys will be required to confirm the location of the palaeochannels relative to the existing surface drainage.

Drilling to date confirms that the uranium mineralisation is not confined to one single channel, however, is associated with a complex palaeodrainage system consisting of many palaeochannels. The identification of multiple mineralised channels emphasises the strong exploration potential of the extensive, uranium-fertile palaeochannel system which is Koppies. The ongoing drilling will be aimed at defining the extent of the mineralised system at Koppies.

The work at Koppies to date clearly demonstrates the potential to delineate further palaeochannels expected to contain uranium mineralisation within the Koppies area. To date less than 5% of the Koppies EPL has been explored, demonstrating the significant potential of the tenement. Mineralisation has been discovered in the limited drilling to date over a wide area despite limited surface radiometric expression throughout the EPL, which emphasizes the value of HLEM and drilling to locate the mineralised palaeochannels.

Mineralisation is calcrete hosted within palaeochannels, the same style of ore used to develop Marenica's U-pgradeTM uranium beneficiation process. The Company is therefore confident that U-pgradeTM could be successfully applied if mining and processing operations were developed at Koppies, for a consequent significant reduction in development costs compared to Marenica's peers with similar grade ores in Namibia.

Marenica's drilling campaigns at Koppies follows the Company's strategy to acquire a significant contiguous strategic package of exploration tenements in the Namib desert, following geological interpretation of regional uranium deposition. The success of the drill program to date supports the Company's decision to apply for exploration ground in this highly prospective mineral field.

The program included 51 RAB holes for 336 m with mineralised intersections greater than 100 ppm U_3O_8 summarised in Table 1. The details of all drill holes are provided in Table 2.



Figure 3 – Drilling at Koppies tenement in Namibia

Drill Hole		From (m)	To (m)	Interval (m)	U₃O₅ Grade (ppm)	Total Hole Depth (m)
KP011		10	14	4	288	16
KP012		2	5	3	128	20
	and	10	17	7	277	
KP038		3	6	3	222	16
KP039		5	7	2	140	15
	and	11	12	1	103	
KP040		5	6	1	127	14
KP041		10	11	1	105	13
KP044		5	7	2	144	13
KP045		2	12	10	687	12
	including	5	7	2	1,974	
KP046		5	8	1	105	13
	and	9	11	2	281	
KP047		5	10	5	194	19
	and	15	17	2	593	
KP048		3	5	2	286	17
KP055		3	16	13	905	19
	including	4	6	2	4,504	

Table 1 - Phase 2 Drill Hole Assay Results from EPL 6987

KP012, 045 and 047 contain 1 m of internal waste; KP055 contains 2 m of internal waste



Figure 4 – Detailed Location of Koppies 1 Drill Holes



Figure 5 – Detailed Location of Koppies 1 Drill Holes

Next Steps

Following from these excellent results, the Company will complete additional HLEM work within the vicinity of Koppies 1 and 2, as the priority will now be to confirm the extent of the palaeochannels to guide the Phase 3 drill program. The Company plans to complete the Phase 3 drilling before the end of the calendar year with exploration continuing through 2020 to test the extent of mineralisation on the Koppies EPL.

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Figure 6 - Cross Section of Phase 1 Drilling at Koppies 1



Figure 7 - HLEM Line over Cross Section

Competent Persons Statement – General Exploration Sign-Off

The information in this announcement as it relates to drilling results, exploration results, interpretations and conclusions was compiled by Mr Herbert Roesener, a Competent Person who is a Member of the South African Council for Natural Scientific Professions (SACNASP). Mr Roesener, who is an independent consultant to the Company, has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking, to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Roesener consents to the inclusion in this announcement of the matters based on the information in the form and context in which it appears.

Drill Hole	Easting	Northing	RL (m)	Total Depth (m)
KP009	528091	7449715	669	4
KP010	528037	7449799	671	5
KP011	527983	7449882	670	16
KP012	527944	7449944	669	20
KP013	527890	7450010	668	4
KP014	528590	7449964	677	3
KP015	528647	7449878	678	4
KP016	528699	7449796	679	3
KP017	528753	7449710	680	4
KP018	529310	7449404	687	4
KP019	529255	7449484	686	4
KP020	529200	7449568	685	4
KP021	529149	7449656	684	4
KP022	529091	7449736	683	4
KP023	529036	7449818	683	4
KP024	528982	7449903	682	4
KP025	528929	7449985	681	4
KP026	528875	7450069	681	4
KP027	529903	7449218	694	4
KP028	529850	7449304	693	4
KP029	529796	7449391	692	3
KP030	529743	7449471	691	4
KP031	529688	7449555	690	4
KP032	529633	7449639	690	4
KP033	529546	7449770	689	4
KP034	529465	7449896	688	4
KP035	529410	7449977	687	3
KP036	529331	7450103	685	13
KP037	529277	7450186	684	4
KP038	529782	7447575	694	16

Table 2Phase 2 Drill Hole Details

Drill Hole	Easting	Northing	RL (m)	Total Depth (m)
KP039	529472	7447582	691	15
KP040	529233	7447510	689	14
KP041	528918	7447507	684	13
KP042	528597	7447509	681	3
KP043	528638	7447510	681	3
KP044	528280	7447533	677	13
KP045	527963	7447600	673	12
KP046	527665	7447644	669	13
KP047	530074	7447611	697	19
KP048	530378	7447632	701	17
KP049	531299	7450364	706	3
KP050	531042	7450458	702	2
KP051	530814	7450509	700	3
KP052	530589	7450514	698	3
KP053	530349	7450529	695	3
KP054	530093	7450571	692	2
KP055	528302	7449386	675	19
KP056	535607	7454074	755	5
KP057	535167	7454270	749	3
KP058	533645	7455125	730	3
KP059	533692	7455251	730	2

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

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

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. 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information. 	 Geochemical samples were derived from Rotary Air Blast (RAB) drilling at intervals of 1 m. Samples were spilt at the drill site using a riffle splitter to obtain a 1.2 to 1.5 kg sample from which 0.6 to 0.75 kg was pulverized to produce a sample for ICP-MS. Samples for laboratory submission were selected by scanning the sample bag for anomalous values. After confirmation of positive assay results, the unmineralised samples will also be submitted to provide continuous assay results. Downhole gamma probing of all drill holes will be completed at a later date.
Drilling techniques	 Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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). 	 RAB drilling is being used for the Koppies drilling program. All holes are being drilled vertically and intersections measured present true thicknesses.
Drill sample recovery	 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. 	 The parameters affecting RAB sample quality are understood. Drill chip recoveries are good at around 98%. Drill chip recoveries were assessed by weighing 1 m drill chip samples. Sample loss was minimised by placing the sample bag directly underneath the cyclone.
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. Whether logging is qualitative or quantitative in nature. Core (or 	 All drill holes are being geologically logged. The logging is qualitative in nature. The lithology type is being determined for all samples. Other parameters routinely logged include colour, colour intensity, weathering, oxidation, sample condition (wet, dry) and total gamma

Criteria	JORC Code explanation	Commentary
	costean, channel, etc) photography.The total length and percentage of the relevant intersections logged.	count (by hand held Rad-Eye scintillometer).Drill chips are not being photographed but a split of each metre interval is stored for future reference if required.
Sub- sampling techniques and sample preparation	 If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 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. Whether sample sizes are appropriate to the grain size of the material being sampled. 	 A portable single tier (50%/50%) splitter was used to treat a full 1m sample from the cyclone into an appropriate size assay sample. All sampling was dry. The above sub-sampling techniques are common industry practice and appropriate. Sample sizes are considered appropriate to the grain size of the material being sampled. Duplicates will be inserted into the assay batch at an approximate rate of one for every 10 samples which is compatible with industry norm. Standards and blank samples will be inserted at an approximate rate of one each for every 20 samples.
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. 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. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	 The analytical method employed is ICP-MS. The technique is industry standard and considered appropriate. Downhole gamma tools will be used.
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	 Geology was directly recorded into a field book and sample tag books filled in at the drill site. The drill data of those logs and tag books (lithology, sample specifications etc.) were transferred by designated personnel into a geological database.
Location of data points	 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. Specification of the grid system used. Quality and adequacy of topographic control. 	 The collars are being surveyed by contractors using a differential GPS. All drill holes are vertical and shallow; therefore, no down-hole surveying was required. The grid system is World Geodetic System (WGS) 1984, Zone 33.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	 Data spacing for reporting of Exploration Results. 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. Whether sample compositing has been applied. 	 The drilling program was exploratory in nature and drill hole spacing varied at 100 to 300 m. Two lines were drilled 500 m apart running in a NNW to SSE direction. The 100 m drill hole spacing may not be sufficient to define an inferred resource at Koppies in the future. Closer spacing may be required. Drill hole intervals were composited to 1 m composites down hole.
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. 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. 	 Uranium mineralisation is strata bound and distributed in fairly continuous horizontal layers. Holes are being drilled vertically and mineralised intercepts represent the true width. All holes were sampled down-hole from surface. Geochemical samples are being collected at 1 m intervals.
Sample security	The measures taken to ensure sample security.	 1m RAB drill chip samples were prepared at the drill site. The assay samples were stored in plastic bags. Sample tags were secured on the outside of the bags. The samples were placed into plastic bags and transported from the drill site to a contract transport company in Swakopmund to be transferred to the Genalysis Intertek sample preparation facility in Tschudi. A sample split was placed into plastic bags and transported from site to Marenica's storage shed in Usakos by company personnel. Upon completion of the assay work the remainder of the drill chip sample bags for each hole will be packed back into crates and then stored in Marenica's dedicated sample storage shed in Usakos.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	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
<i>Mineral tenement and land tenure status</i>	 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 work to which the Exploration Results relate was undertaken on exclusive prospecting licence EPL 6987. The EPL was granted to Manmar Investments One Eight Two (Pty) Ltd (wholly owned subsidiary of ASX listed Marenica Energy Limited) on 10 April 2019. The EPLs are in good standing and is valid until 9

Criteria	JORC Code explanation	Commentary
	 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. 	 April 2022. The EPL is located within the Namib Naukluft National Park in Namibia. There are no known impediments to the project.
Exploration done by other parties	 Acknowledgment and appraisal of exploration by other parties. 	 General Mining located uranium mineralisation from a drill program reported in July 1978. The results of this program have provided the base information for Marenica to locate exploration targets. They were not captured digitally and were and will not be used for resource estimation.
Geology	• Deposit type, geological setting and style of mineralisation.	 Koppies mineralisation occurs as secondary carnotite enrichment of variably calcretised palaeochannel and sheet wash sediments and adjacent weathered bedrock. Uranium mineralisation at Koppies is surficial, stratabound and hosted by Cenozoic and possibly Tertiary sediments, which include from top to bottom scree sand, gypcrete, calcareous sand and calcrete. The majority of the mineralisation is hosted in calcrete. Locally, the underlying weathered Proterozoic bedrock is occasionally also mineralized.
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. 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. 	 51 holes for a total of 336 m have been drilled in the current program up to the 31 October 2019. All holes were drilled vertically and intersections measured present true thicknesses. Table 2 lists all the drill hole locations. Table 1 lists the results of intersections greater than 100 ppm U₃O₈ over 1 m.
Data aggregation methods	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. 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. The assumptions used for any reporting of metal equivalent values 	 The reported grades have not been cut. All grade intervals are arithmetic averages over the stated interval.

Criteria	JORC Code explanation	Commentary
	should be clearly stated.	
Relationship between mineralisatio n 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 (eg 'down hole length, true width not known'). 	 The mineralisation is sub-horizontal and all drilling vertical, therefore, mineralised intercepts are considered to represent true widths.
Diagrams	 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. 	 Table 2 show all drill hole locations. Table 1 lists the anomalous intervals. Maps and sections are included in 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. 	 Comprehensive reporting of all Exploration Results was practised on receipt of the results from the first drilling stage.
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. 	 The drilling completed by General Mining prior to July 1978 has been reported.
Further work	 The nature and scale of planned further work (eg 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. 	 Planned work includes geophysical exploration to confirm the extent of the palaeochannel. Further drilling will be conducted as part of the exploration program at Koppies.