ASX ANNOUNCEMENT/MEDIA RELEASE

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BARAKA SEEKS HELIUM & CONVENTIONAL HYDROCARBON POTENTIAL

Baraka Energy & Resources Limited (ASX: BKP) (Baraka) or (the Company) having now been recapitalized with an intermediate cash injection of $600,000 effectively using the majority of its placement capacity for now, is working towards an exploration program as a result of the fracking ban having been recently lifted in the Northern Territory.

Conventional Hydrocarbon Potential

The Company has continued regional and permit wide desktop studies as part of its work program commitment with a focus on exploration for conventional hydrocarbon resources in the permit. The Company’s current prospects and leads map is shown below.

The work has initially focused on the Randal–MacIntyre area, in the northwest, where the discovery of heavy gas readings in the MacIntyre wells has highlighted the hydrocarbon potential in the area. While a significant reservoir (Hagen Porous Carbonate) section was encountered in the Randall-1 well with oil saturation.

Whilst the focus is currently on conventional targets, EP 127 is a large permit and the Company considers the south-eastern portion of the permit which covers the northern extent of the Toko Syncline to have both conventional and unconventional prospectivity.
Helium Potential

As part of the work described above the Company has explored the potential for the permit to contain the required elements to yield significant helium accumulations.

Helium gas is produced by radioactive decay of U and Th in rocks and sediments, and it can be trapped in the subsurface under conditions that also trap natural gas, many natural gas deposits contain economically significant helium, with helium being worth over 10 times the natural gas price.

Based on the work done to date the company is encouraged that the permit contains the key elements for the accumulation of helium with recent analogue studies providing more confidence in these key elements.

The key elements required for significant accumulation of helium are; the age of the basement and basin fill, those rocks containing helium source potential; an active old aquifer system close to basement; good sealing potential; and relatively shallow and under-pressured rock strata.

These elements are critical and exist in the Southern Georgina Basin covered by EP 127 and are shared by majority of the global analogues that produce helium today.

Most significantly the area covered by EP 127 shares these elements with the Amadeus Basin immediately south where high levels of helium have been tested. The geologic elements map below shows the Southern Georgina Basin and the adjacent Amadeus Basin separated by the Arunta Region.

During the Middle and Early Cambrian the South Georgina Basin and the Amadeus Basin were part of the greater Central Australian (Centralian) Super-basin that remained more
or less intact until the final break up during the Alice Spring Orogeny. The Amadeus Basin has recorded the most enriched helium concentration in Australia. Being part of the Centralian Super-basin for a significant part of their joint history the Georgina and Amadeus basins have similar basement and early fill elements conducive for helium enrichment.

**Amadeus Basin**

Historically Central Petroleum has reported on the helium potential of the Amadeus Basin. The two most significant helium discoveries to date in the Amadeus Basin occurred at Magee-1 from the Heavitree quartzite (6.2% helium), the flow (63.2 MCFD) included nitrogen, wet gas and helium, the other discovery highlighted by a flow (initially around 500 MCFD, but no long term test was performed) coming out of fractured granite basement in the Mt Kitty-1 well (5.8% helium). These are extremely high concentrations by world standards. It has been reported that Mt Kitty could host recoverable resources of up to 61BCf of gas and 29.7BCF of the even more valuable helium (P50) if it is a four-way dip closure.

Most recently (2 May 2017) Santos announced it will increases its interest in the permits EP(A)111 and EP(A)124. The EP(A)s are located in the Amadeus Basin and adjacent to existing Santos operated areas in joint venture with Central. The move being a strong indication that Santos considers the Amadeus Basin to have significant potential.

In its 2017 Investor Day Presentation Santos highlighted the Dukas Prospect stating that on discovery helium and hydrogen gas stream contents represent high value liquids proxies (see figure below).

Central reported that based on the Magee-1 discovery the Dukas prospect has the potential to contain 2.4TCF gas and 493BCF helium and further work by the joint venture suggests the nearby Sculthorpe prospect has similar potential.
There are two other notable levels of helium in the northern portion of the Amadeus Basin, at Ooraminna-2 (2010) a gas flow of 150 MCFD had a helium content of 0.22 per cent from the Pioneer sandstone and in the Palm Valley field 105km west produces gas with a helium content of 0.15 per cent from the Pacoota and Stairway sandstones. This suggests the helium source is wide spread but may also show that the trapped helium content can be diluted by natural gas in certain scenarios.

McArthur Basin
To the north of the Georgina Basin the Egilabria-2 (2013) well located in the McArthur Basin produced high methane and helium (greater than 1%) on test, believed to be from Lawn Creek Shale and Riversleigh Shale, further supporting helium rich source potential underlying these old basins.

Future Work
Within EP127 the initial focus will be on the Mt Baldwin sandstone and the Red Heart dolomite in the Dulcie Syncline. These formations are close to basement and are similar to the Heavitree quartzite seen in the Amadeus Basin. The distribution of these in the area of EP127 is shown below.

The fractured basement potential (as seen at Mt Kitty in the Amadeus Basin) will also be evaluated across the permit. The leads (orange) shown on the prospects and leads map copied again below is a good representation of the potential for fractured basement highs as the leads represent basement highs interpreted from gravity and magnetics and confirmed by seismic where available.
The Company is planning additional work utilising the spectral GammaRay logs from the recent modern wells drilled as part of the 2011/2012 and 2014 drilling campaigns by PetroFrontier and Statoil respectively. Spectral GammaRay has the ability to distinguish U, Th and K from the total GR count providing more detailed characteristics of the rock components. In addition the Company will review and incorporate the data from the recent HyLogging™ spectral work performed in the area. This work, utilising the HyLogging™ technique, was undertaken by Geoscience Australia in collaboration with the Northern Territory and State governments.

Hyperspectral logging data collected by HyLogger™ instruments were evaluated from 13 wells in the Southern Georgina Basin, including petroleum, mineral and stratigraphic wells. HyLogging data can provide an improved understanding of the sedimentological, mineralogical and diagenetic characteristics, as well as associated spatial heterogeneity, of formations in sedimentary basins.

The work described above is designed to attempt to quantify the U and Th helium source character of the basement and early basin fill deposits where unconformity and sandstone related accumulations of enriched U and Th are possible which would further enhance the helium sourcing from the basement.

The Company will also look at adding a helium survey to the planning of its permit wide geochemical survey (for hydrocarbons) and seismo-electric survey designed to significantly reduce the uncertainty of hydrocarbon presence in the prospects and leads already identified in the permit. It is envisaged that water from bore holes and stock wells will be sampled and overburden gas sampled and analysed for helium.
The stacking of a seismo-electric survey, geochemical survey and helium survey data over the interpreted prospects and leads from existing seismic and gravity magnetic surveys is designed to reduce the uncertainty of resistive fill within the structural closures and then to attempt to further characterise the fill as hydrocarbons and/or helium.

**Corporate**

Baraka advises that a Director of the firm GTT Ventures PL who arranged the recent capital for Baraka has requested access to the shareholders register. We will ascertain the intentions of the shareholder and keep the market informed on this and other discussions we have had with that firm.

The company will also be providing an update on the Iron sands in the near future, and will be calling a shareholders meeting to refresh the 15% facility used in the recent placement, where shareholders are invited to attend and discuss the progress of the company and its assets.

The Board will now actively seek a farm In partner with the Fracking ban having now been lifted.

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