

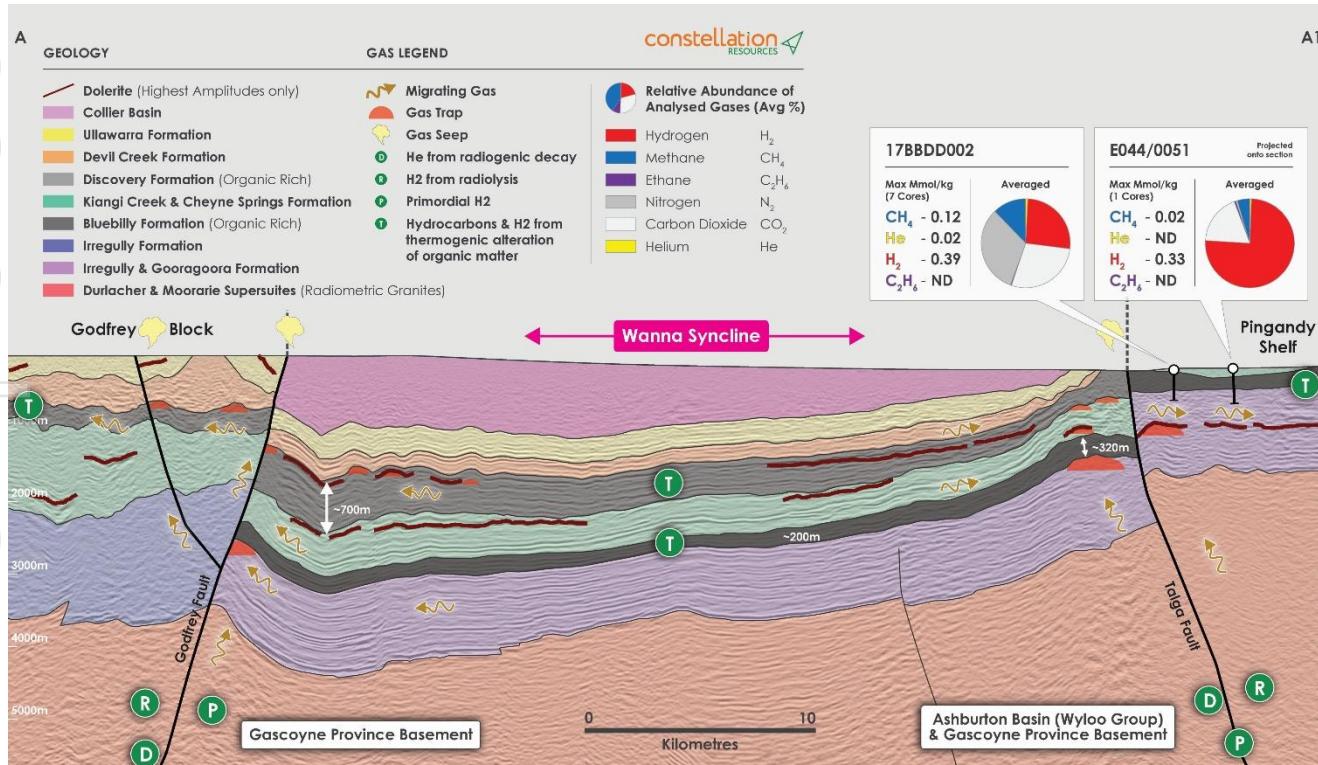
## EVIDENCE FOR HYDROGEN AND HELIUM CONFIRMED AT EDMUND-COLIER PROJECT

**Constellation Resources Limited** (the "Company" or "Constellation") is pleased to advise preliminary results from testing conducted by the Commonwealth Scientific and Industrial Research Organisation ("CSIRO") on crushed rock and fluid inclusion analysis across its Edmund-Collier Natural Hydrogen ("NatH<sub>2</sub>") Project ("Edmund-Collier"). The Company's wider Western Australian NatH<sub>2</sub> land portfolio spans 87,602km<sup>2</sup> across three sedimentary basins, strategically located within proximity to gas pipelines and existing major mining producers.

Edmund-Collier represents a **first-of-its-kind opportunity in Western Australia to explore for natural hydrogen and helium across a large, underexplored basin, with no prior deep drilling to date.**

### HIGHLIGHTS

- CSIRO studies to determine the composition of trapped gases within crushed rock and fluid inclusions from historic mineral exploration diamond drillholes at Edmund-Collier have established evidence for the generation and migration of hydrogen, helium and associated gases.
- All drillholes sampled detected the presence of either hydrogen, helium or hydrocarbon gases (methane and/or ethane).
- Importantly, helium has been detected in a sandstone drillhole sample located near the Talga Fault which is one of two basement tapping faults that extend along the north and south boundaries of the Wanna Syncline.
- Wanna Syncline interpreted to have preserved traps and source-rocks sufficiently buried, with overlying seals, for hydrogen and associated gases to be either retained within shales or within overlying reservoirs.



**Figure 1: Edmund-Collier conceptual hydrogen system and reprocessed seismic line displaying anomalous crushed rock analyses from drillholes containing hydrogen, helium and natural gas (methane).**

## CSIRO - CRUSHED ROCK AND FLUID INCLUSION STUDIES AT EDMUND-COLIER

The Company sampled a number of diamond holes that were publicly available from several of the deeper exploration holes previously drilled by mineral explorers within the Edmund-Collier. Analysis by the CSIRO on these drillholes has confirmed a suite of gases trapped within the pores and/or in fluid inclusions, including **either hydrogen, helium or natural gases (methane and/or ethane)** that **were detected in nearly all the submitted diamond core samples.** (Figure 1 & 2). The Company's thesis derived from results to date, is that Edmund-Collier represents a **first-of-its-kind opportunity in Western Australia to explore for natural hydrogen and helium across a large, underexplored basin, with no prior deep drilling to date.**

The Company is highly encouraged by the results which support the development of:

- the detection of hydrogen, helium and associated gases in multiple intervals is evidence that these gases have potentially both been generated and migrated from the basement and within the basin (Figure 3); and
- the co-existence of hydrogen, helium, methane, carbon dioxide and ethane is a possible indication of a common genetic origin tied to the thermal maturation of organic-rich shales, potentially within the Blue Billy and Discovery Formations.

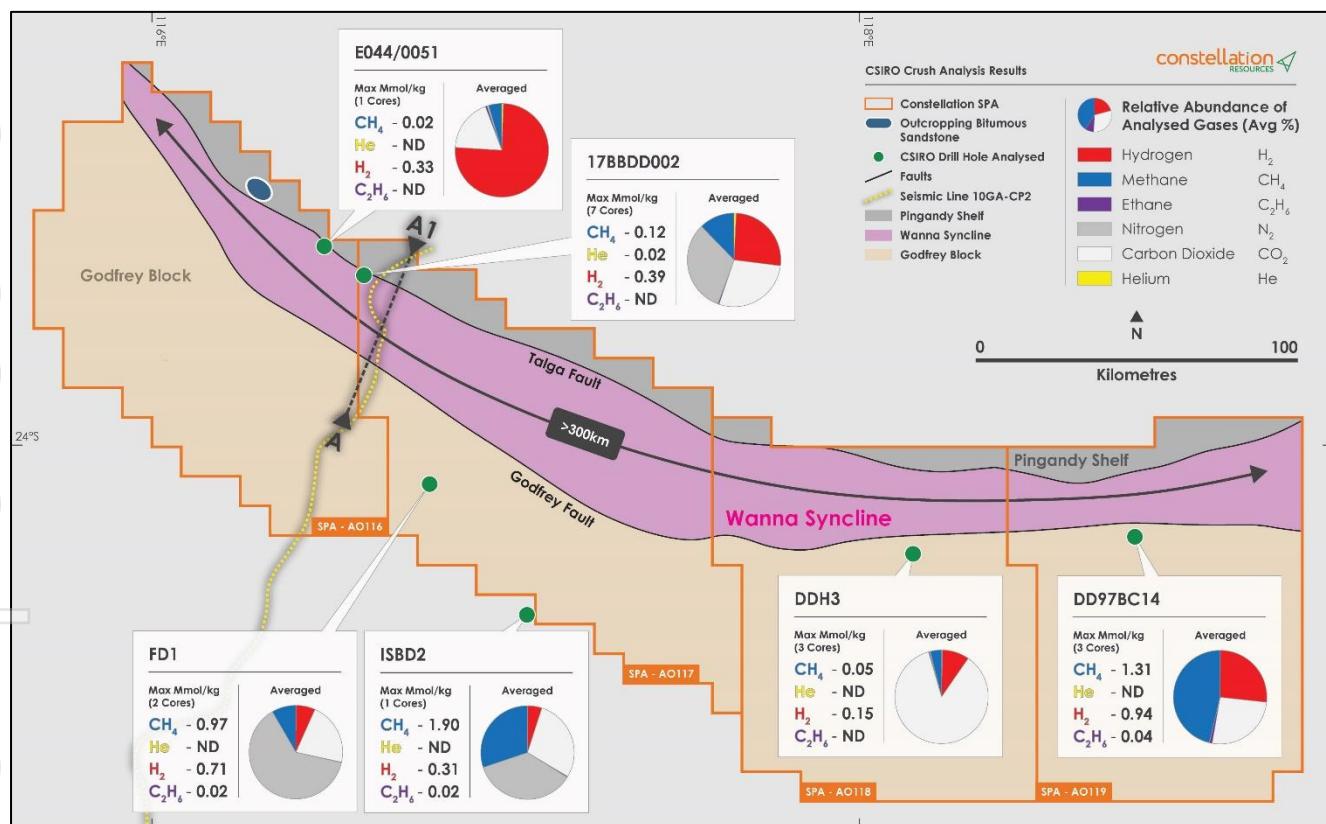


Figure 2: Summary of CSIRO bulk rock crushing analysis within the Edmund-Collier.

The footprints of the organic-rich Blue Billy and Discovery Formations within the Edmund-Collier are extensive. The results from the current CSIRO studies, underpin the generating potential for targeted gases from these organic-rich formations. The detection of helium, either by the decay of radiometric rich rocks and/or from deep primordial sources, further broaden the exploration potential of the basin.

The results are highly encouraging given the selected samples are all derived from drillholes targeting base-metal mineralisation and are located on the shallow outer edges of the prospective Wanna Syncline target. The outer basin edges have been extremely useful for obtaining geological evidence of potential generation of gases.

The Wanna Syncline is an extensive large-scale (300km x 40km x 4.5km) target for both basement-derived hydrogen and helium and basin-derived thermogenic hydrogen and associated gases. Target zones are deep, potentially overpressured and exhibit extensive dolerite sills that could provide seals for gas preservation. The Wanna Syncline is a prime target for further seismic acquisition and drilling in zones proximal to basement tapping faults and in traps within the syncline itself. Neither of these target plays have been previously drill tested.

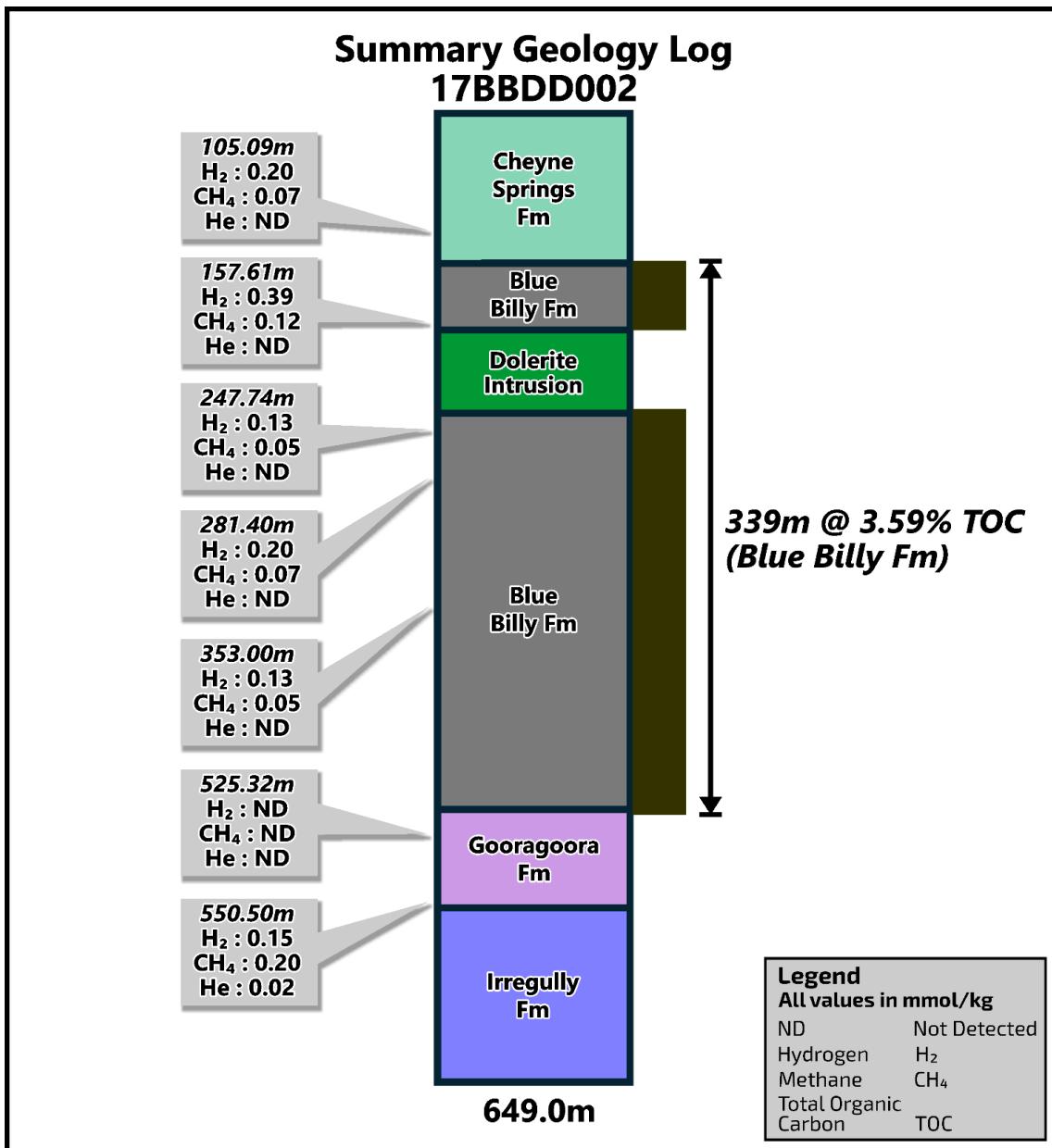


Figure 3: Results of CSIRO molecular gas composition bulk rock crushing over multiple intervals throughout 17BBDD002, implying migration of gases throughout the stratigraphic column.

Molecular gas composition analyses by bulk rock crushing were conducted by CSIRO on 23 core samples that were obtained from seven diamond drillholes. To liberate, extract and analyse the trapped gases within these core intervals, the samples were crushed and processed within a gas-tight modified stainless-steel crusher along with blank corrections.

In-situ Raman spectroscopic analysis of fluid inclusions was performed on 14 core samples from seven drillholes, primarily targeting secondary veins within a shale host. The Horiba LabRam HR Evolution Raman Spectrometer was used to identify the types of gases trapped in these inclusions. Based on the spectrometer's selected range, the gases analysed included hydrogen, oxygen, carbon dioxide, methane, and nitrogen. Helium and ethane were excluded due to molecular characteristics and limitations of the analytical technique.

## CURRENT AND FUTURE WORK PLANS

The key aim for work programs underway within the Company's wider Western Australian NatH<sub>2</sub> land portfolio which spans 87,602km<sup>2</sup> is to confirm prospectivity and to define drill targets. The company has been rewarded preferred candidate status for nine Special Prospecting Authority -Acreage Option "SPA-AO" permits by the Department of Mines, Petroleum and Exploration. The tenure instruments in place allows the Company to undertake low-cost – high-value work programs. To date these programs include the reprocessing of a historic seismic line, reviews of Geological Survey of Western Australia (GSWA) mapping and open file WAMEX reports, sampling of publicly available diamond core for thermal maturity and total organic carbon analysis and important studies with Australia's leading research organisation, the CSIRO.

The results from these work streams are continuously supporting and underpinning the prospectivity of the Company's basin-scale projects for natural hydrogen and associated gases including developing emerging quality drill targets across the Edmund-Collier Project. The Company is also well advanced to undertake surface-gas sampling programs from old drill collars and soils to further refine prospective areas.

## EMERGING DRILL TARGETS

The Wanna Syncline is interpreted to contain traps and source-rocks sufficiently buried (with overlying seals) for hydrogen and associated gases, either retained within shales or in overlying reservoirs. Work is continuing to determine which exploration methods will best define drill targets in the area.

Located on the western most portion of the Pingandy Shelf in SPA-STP-116, a folded, breached antiformal sequence containing bituminous sandstones up to 60m thick within the Blue Billy Formation was intersected by several 1990s Rio Tinto mineral exploration drillholes (WAMEX Report A54569), and was mapped in outcrop by GSWA. These observations support the thesis that a significant volume of hydrocarbons may have migrated into the sandstone from underlying organic-rich shales of the Blue Billy Formation or from source-rocks within the adjoining Wanna Syncline. Based on maturity analysis completed to date, the Blue Billy Formation is overmature and has at some stage has been within hydrogen generation window. The mapped bituminous sandstones are located ~40 kilometres west of seismic line GA 10- CP2 (Figure 2).

Based on the reprocessed seismic line, a possible equivalent of this antiformal trap, (which has not been breached) is located alongside the Talga Fault corridor adjoining the Wanna Syncline. Given the promising analyses of hydrogen, methane and helium within drillholes (E44/0051 and 17BBDD002) located on or near the seismic section, this zone is an attractive shallow drill target. A shallow drillhole into this target will assist in testing the potential of this target and provide important information that can be applied to the entire Edmund-Collier.

#### **EDMUND-COLIER NATURAL HYDROGEN PROJECT BACKGROUND**

The Edmund-Collier Project is in the Gascoyne Province of Western Australia. The four contiguous SPA-AOs (37,288km<sup>2</sup>) are bordered to the north, east and west by gas transmission pipelines. The Edmund Fold Belt is largely outcropping and contains a well-documented folded succession of up to 4-5km thick Proterozoic clastics, carbonates and dolerite sills, with associated deeply penetrating fault systems that cap radiogenic Proterozoic basement providing the elements needed for a total hydrogen system with possible reservoirs, seals, migration pathways and traps identified.

Potential sources for hydrogen include thermogenic hydrogen from organic-rich shales, gases generated from heat-producing radiogenic Paleoproterozoic granites (Durlacher and Moorarie Supersuites) by the hydrolysis of groundwater, and from primordial degassing. Helium generation is from the extremely long-lived radiogenic decay of uranium and thorium in these radiogenic granites and potentially also from some sedimentary rocks.

A significant opportunity in the Edmund–Collier Project is the development of multiple and long-lived traps for gas accumulations, including anticinal and structural traps, stratigraphic depositional pinch outs and diagenetic traps, and density driven hydrologic traps. These prospective fold-closures at surface can be extrapolated in the subsurface in various geophysical interpretations. Importantly, widespread anticline development since c. 1171 Ma and voluminous dolerite intrusions have provided traps for the potential accumulation of ongoing hydrogen and helium gases for at least one billion years.

#### **For further information, please contact:**

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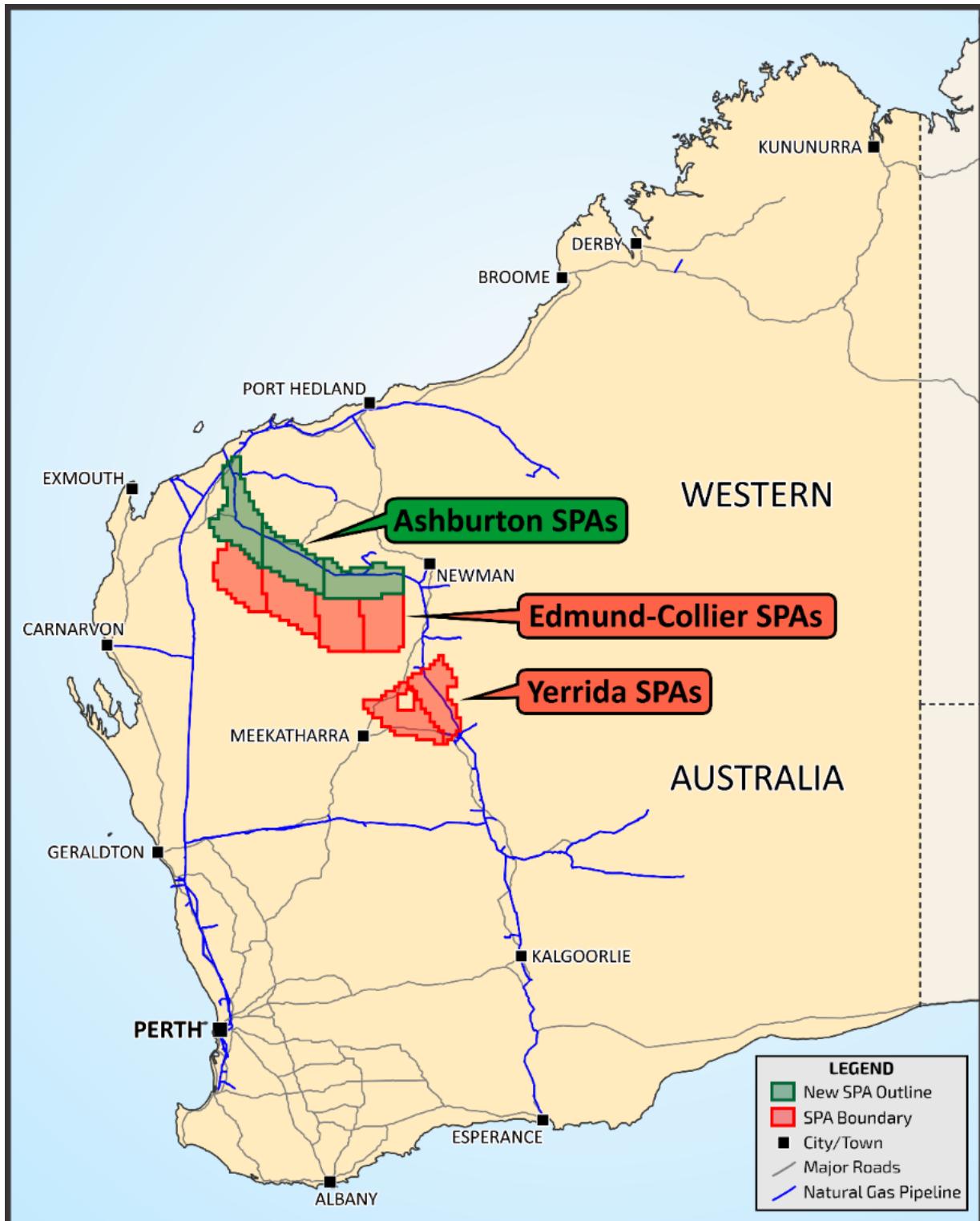


Figure 4: Constellation SPA-AO application locations.

## COMPETENT PERSONS STATEMENT

The information in this announcement that relates to Exploration Results is based on information reviewed by Mr Peter Muccilli, a Competent Person who is a Member of the Australian Institute of Mining and Metallurgy. Mr Muccilli is the Technical Director for Constellation Resources Limited and a holder of shares and incentive options in Constellation Resources. Mr Muccilli has sufficient experience that is relevant to the styles of mineralisation and types 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 Resources and Ore Reserves" (JORC Code). Mr Muccilli consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Exploration Results is extracted from the Company's ASX announcement dated 3 July 2025 and 19 May 2025 which are available to view at the Company's website on [www.constellationresources.com.au](http://www.constellationresources.com.au). The information in the original ASX Announcements that related to Exploration Results was based on, and fairly represents information compiled by Peter Muccilli, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Muccilli is a Technical Director of Constellation Resources Limited and a holder of shares and options in Constellation Resources Limited. Mr Muccilli has sufficient experience that is relevant to the styles of mineralisation and types 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 Resources and Ore Reserves" (JORC Code). The Company confirms that it is not aware of any information or data that materially affects the information included in the original market announcement. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

## FORWARD LOOKING STATEMENTS

Statements regarding plans with respect to Constellation's projects are forward-looking statements. There can be no assurance that the Company's plans for development of its projects will proceed as currently expected. These forward-looking statements are based on the Company's expectations and beliefs concerning future events. Forward looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of the Company, which could cause actual results to differ materially from such statements. The Company makes no undertaking to subsequently update or revise the forward-looking statements made in this announcement, to reflect the circumstances or events after the date of that announcement.

*This ASX Announcement has been authorised for release by the Company's Managing Director, Mr Peter Woodman.*

**Table 1: Edmund–Collier Drillholes**

Drillhole	Easting*	Northing*	RL**	Collar Azimuth (degrees)	Collar Dip (degrees)	Total Depth (m)
17BBDD002	460215	7397610	295	210	-80	649
DD97BC14	682102	7313931	533	0	-90	153.3
DD97BC16	677317	7311917	470	0	-90	466
DDH2	620896	7311344	505	0	-60	240.79
DDH3	618266	7311144	510	0	-70	277.37
E044/0051	451720	7409140	320	0	-90	441.4
FD1	479250	7333095	400	140	-60	501.2
ISBD2	506290	7292436	500	60	-80	475

\*GDA94 UTM MGA Zone 50

\*\* GDA94 UTM MGA Zone 50 RL estimated from topographic maps

**Table 2: Edmund–Collier Drillholes Extracted Gas Concentrations from Crushed Core**

Hole ID	Sample Name	Depth from (m)	Host lithology	Extracted gas concentration (mmol/kg rock)					
				He	H <sub>2</sub>	CO <sub>2</sub>	C <sub>2</sub> H <sub>6</sub>	N <sub>2</sub>	CH <sub>4</sub>
17BBDD002	17BBDD002_105.09	105.09	sandstone + siltstone	ND	0.2	0.01	ND	0.73	0.07
	17BBDD002_157.61	157.61	sandstone + siltstone	ND	0.39	ND	ND	ND	0.12
	17BBDD002_247.74	247.74	shale	ND	0.13	0.01^	ND	ND	0.05
	17BBDD002_281.40	281.4	shale	ND	0.2	0.01	ND	0.73	0.07
	17BBDD002_353.00	353	shale	ND	0.13	0.01^	ND	ND	0.05
	17BBDD002_525.32	525.32	sandstone + siltstone	ND	ND	0.02	ND	ND	ND
	17BBDD002_550.50	550.5	sandstone	0.02	0.15	0.88	ND	ND	0.2
E044/0051	E044/0051_191.48	191.48	sandstone + siltstone	ND	0.33	0.08	ND	ND	0.02
DD97BC14	DD97BC14_141.10	141.1	sandstone	ND	0.47	0.58	ND	ND	0.97
	DD97BC14_148.25	148.25	sandstone	ND	0.64	0.7	0.03	ND	1.28
	DD97BC14_152.70	152.7	sandstone	ND	0.94	0.72	0.04	ND	1.31
DDH3	DDH3_11.60	11.6	sandstone	ND	0.15	1.84	ND	ND	0.05
	DDH3_36.42	36.4	sandstone	ND	0.07	0.09	ND	ND	0.04
	DDH3_65.15	65.2	shale	ND	ND	0.12	ND	ND	ND
FD1	FD1_254.33	254.33	shale	ND	0.71	2.63	0.02	ND	0.97
	FD1_500.55	500.55	sandstone	ND	0.1	0.01	ND	7.65	0.05
ISBD2	ISBD2_107.00	107	shale	ND	0.31	1.8	0.02	2.27	1.9

^Indicates values less than 0.01 mmol/kg rock. ND = Not detected

All values rounded up to two decimal places

**Table 3: Results of the Gases Tested and Detected in Fluid Inclusions in the Mineral Infilled Veins with Raman Spectrometer**

Hole ID	Measured depth (m)	Host lithology	Vein lithology	Detected gasses*				
				H <sub>2</sub>	O <sub>2</sub>	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub>
17BBDD002	273.75	Shale	C+Q	✓	ND	✓	✓	✓
E044/0051	98.9	Shale	C+Q	✓	ND	✓	✓	ND
DD97BC16	45.25	Shale	C	ND	ND	ND	✓	ND
DDH2	35.76	Shale	Q	ND	ND	ND	✓	ND
	48.08	Shale	Q+S	ND	ND	✓	✓	ND
	54.53	Shale	Q+S	✓	ND	✓	✓	ND
	60.3	Shale	Q+S	✓	ND	✓	✓	ND
	70.94	Shale	Q+S	✓	ND	✓	✓	ND
DDH3	71.48	Shale	Q	✓	ND	✓	✓	✓
	118.62	Shale	Q	ND	ND	ND	✓	ND
	216.56	Sandstone	Q	ND	ND	ND	✓	ND
	269.6	Sandstone	Q+D	ND	ND	✓	✓	ND
ISBD2	110.9	Shale	C+Q	✓	ND	✓	✓	✓

C = Calcite, D = Dolomite, Q = Quartz, S = Salt, B= Barite, ND = Not Detected, ✓=Detected

\*Note: Ethane and Helium were not analysed due to nature of molecules and/or technique limitations.

**Appendix 1: 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
<i>Sampling techniques</i>	<p><i>Nature and quality of sampling (i.e. 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.</i></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p> <p><i>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.</i></p>	<p>Core samples were sourced from publicly available diamond drill holes drilled within the boundaries of the Edmund–Collier Special Prospecting Authorities applications. The diamond drillholes are located at the Geological Survey of Western Australia Perth Core Library, 37 Harris St, Carlisle WA 6101.</p> <p>Standard industry cores collected by Geological of Western Australia staff. The small core samples (several centimetre lengths) were selected from the core available and delivered to the relevant CSIRO laboratories for analyses:</p> <p>.</p>
<i>Drilling techniques</i>	<p><i>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).</i></p>	<p>Further details regarding drilling techniques for reported mineral diamond holes are available in the following references;</p> <p>17BBDD002: Drilled by AusQuest, refer to open file WAMEX reports A116556, A131800, A132230, A135257</p> <p>E044/0051. Drilled by Alcoa of Australia Ltd refer to open file WAMEX reports A12226, A105861, A110192, A122258 and A143954</p> <p>DD97BC14 was drilled by Rio Tinto Exploration refer to open file WAMEX reports A54567, A54569 and A110192</p> <p>DDH3 was drilled by Westfield Minerals N.L. refer to open file WAMEX reports A571 and A143954</p>

Criteria	JORC Code explanation	Commentary
		<p>FD1 was drilled by Dolphin Resources, refer to open file WAMEX reports A94468, A96612 and A105861</p> <p>ISBD02 was drilled by Western Mining Corporation, refer to WAMEX reports A41630, A110192 and A105861.</p> <p>See included table for Hole ID locations and the intervals analysed.</p>
<b>Drill sample recovery</b>	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p> <p><i>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.</i></p>	Not applicable.
<b>Logging</b>	<p><i>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.</i></p> <p><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged.</i></p>	Reported diamond holes were logged by consultant Iain Copp from Good Earth Consulting at DMPE Core Library to interpret geological intervals and select representative sample site for analysis.
<b>Sub-sampling techniques and sample preparation</b>	<p><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></p> <p><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></p> <p><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></p>	<p>The diamond holes that are publicly available in the GSWA core library and were cut and collected from GSWA technicians. The samples were submitted to the CSIRO, 26 Dick Perry Avenue, Kensington, WA 6151 to the relevant laboratories for bulk crushed rock and the fluid inclusions analyses</p> <p>For each analysis, the depth, geology of the sample were recorded and assessed for representivity</p>

Criteria	JORC Code explanation	Commentary
	<p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	
<b>Quality of assay data and laboratory tests</b>	<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></p> <p><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></p> <p><i>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.</i></p>	<p>Both the Bulk Rock Crushing and Raman Spectroscopy of Fluid Inclusions was undertaken by the CSIRO and analyses were undertaken at the CSIRO Laboratories.</p> <p>A report titled "Hydrogen Exploration in the Edmund Collier Basin, WA - Thermal Maturity, Bulk Rock Gas Composition and Fluid Inclusion Analyses" (commercial-in-confidence) has been received. The CSIRO authors include Siyumini Perera, Mohinudeen Faiz, Se Gong, Claudio Delle Piane, Kyle Gavrily and Richard Kempton.</p> <p>For reported fluid inclusion analyses, the methodology follows:</p> <p>Bourdet, J., Delle Piane, C., Wilske, C., Mallants, D., Suckow, A., Questiaux, D., Gerber, C., Crane, P., Deslandes, A., Martin, L. A. J., &amp; Aleshin, M. (2023). Natural hydrogen in low temperature geofluids in a Precambrian granite, South Australia: Implications for hydrogen generation and movement in the upper crust. <i>Chemical Geology</i>, 638, 121698. <a href="https://doi.org/10.1016/j.chemgeo.2023.121698">https://doi.org/10.1016/j.chemgeo.2023.121698</a>.</p> <p>For In-situ Raman spectroscopic analysis of fluid inclusions, a Horiba LabRam HR Evolution Raman Spectrometer was used to identify the types of gases trapped in these inclusions. Based on the spectrometer's selected range, the gases analysed included hydrogen, oxygen, carbon dioxide, methane, and nitrogen. Helium and ethane were excluded due to molecular characteristics and limitations of the analytical technique</p> <p>For bulk rock crushing technique, the methodology follows: Gong, S., Gavrily, K., Sestak, S., Bourdet, J., Schintie, R., Delle Piane, C., Perera, S. and Frery, E (2024). Unveiling H2 trapped in fluid inclusions through a crushing technique. In: Australian Natural Hydrogen Conference 2024, Adelaide, Australia.</p>
<b>Verification of sampling and assaying</b>	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <p><i>The use of twinned holes.</i></p>	<p>The Verification of gases detected by CSIRO, can be validated with the repeated detection of gases from the analysis undertaken and over many intervals for some holes, both in crushed rock and in the fluid inclusions.</p>

Criteria	JORC Code explanation	Commentary
	<p><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></p> <p><i>Discuss any adjustment to assay data.</i></p>	<p>More sampling and analysis (both crushed rock and fluid inclusion) are required to better understand the gas distribution within the geological formations.</p>
<b>Location of data points</b>	<p><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></p> <p><i>Specification of the grid system used.</i></p> <p><i>Quality and adequacy of topographic control.</i></p>	<p>The hole coordinates were taken from submitted DEMIRS reports, and GPS accuracy deemed appropriate for basin-scale prospectivity analysis.</p> <p>The R.L of drillholes were estimated from Topographic Map Sheets contours and accuracy considered appropriate for this level of reporting.</p> <p>Grids are all GDA94 UTM MGA Zone 50.</p>
<b>Data spacing and distribution</b>	<p><i>Data spacing for reporting of Exploration Results.</i></p> <p><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></p> <p><i>Whether sample compositing has been applied.</i></p>	<p>Deeper diamond drill holes were selected and sampled to get variety of gas measurements over different geological intervals over the stratigraphic column in the Edmund-Collier Basin.</p> <p>For each reported interval, the sample location downhole has been tabled. Over the reported interval the range of gas values has been recorded to demonstrate variability and repeatability.</p> <p>The pie graphs included in the diagrams are the average of the 6 gases that were analysed from the crush rock samples. Some drill holes only have one crushed sample analysed, the maximum samples taken from a hole was seven.</p>
<b>Orientation of data in relation to geological structure</b>	<p><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></p> <p><i>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.</i></p>	<p>Diamond holes 17BBDD002 and E044/0051 intersects the organic-rich Blue Billy Formation along the northwest margins of the Pingandy Shelf. Thickness of the Blue Billy Formation within these holes are interpreted to be up to 370 metres, but elsewhere along the Pingandy Shelf, the Blue Bully Formation is interpreted to be up to 800m in thickness based on GSWA mapping and seismic interpretation. The Blue Billy Formation dips shallowly to the south and strikes northwest. These units are outcropping and both holes are drilled directly down dip.</p> <p>The Pingandy Shelf is located on the footwall side of the steeply south dipping Talga Fault corridor. The Talga Fault corridor defines the northern margin of the Wanna Syncline.</p> <p>Diamond hole DD97BC14 intersects the organic-rich Discovery Formation on the Godfrey Block. The hole is located down dip of the outcropping surface around</p>

Criteria	JORC Code explanation	Commentary
		<p>the Brumby Anticline. The Discovery Formation as interpreted here also includes underlying shales and siltstones of the uppermost Kangi Creek Formation.</p> <p>The Discovery Formation in DD97BC14 is shallowly dipping to the south and strikes west. The estimated thickness of the Discovery Formation in the area is around 700m.</p> <p>Diamond holes DDH3 intersects the organic-rich Discovery Formation on the Godfrey Block.</p> <p>Diamond Hole ISBD2 intersects the organic-rich Discovery Formation and Kiangi Formation on the Godfrey Block.</p> <p>The Godfrey Block is located on the southern side of the Wanna Syncline along the footwall side of the Godfrey Fault – Mt Vernon Fault.</p>
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	Not applicable.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	Not applicable.

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<p>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.</p> <p>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.</p>	<p>The Edmund-Collier Project is located in the Gascoyne Province of Western Australia. The four contiguous SPA-AOs (477 graticular blocks covering 37,288km<sup>2</sup>) span an east-west strike length of approximately 380km and are bordered to the north, east and west by gas transmission pipelines</p> <p>The Company is the preferred applicant of the SPA-AO applications. The step-by-step process toward working on an SPA-AO is highlighted below:</p>

1. The Company confirms its intention to proceed with the SPA-AO on the basis of the requirements outlined, including undertaking a number of regulatory requirements, namely:
  - i. Entering into the expedited procedure process under the Native Title Act 1993 (Cth) future act provisions;

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>ii. Engaging relevant stakeholders (pastoral stations, other tenement holders etc); and</li> <li>iii. Assessment and approval of proposed exploration work programs under the Petroleum and Geothermal Energy Resources Act 1967 (WA) ("PGERA") which includes the submission of an Environment Plan which must be approved prior to commencement of any activity.</li> </ul> <p>2. It is expected the time required to complete the above regulatory requirements will be approximately six to twelve months, subject to successful stakeholder engagement.</p> <p>Once complete, the SPA-AO will proceed to be granted to allow a six-month work window, the dates of which can be elected by the Company to assist in optimal sampling conditions.</p> <p>3. The Company then has a further six months to evaluate the exploration data collected during the field programs and if the results warrant further work, apply for a Petroleum Exploration Permit ("PEP"). The number of blocks within a single PEP permitted to be applied for is limited to 50% of the SPA-AO area and the application process for a PEP through to grant, the timeframe of which is dependent upon consultation periods with relevant stakeholders.</p>
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Limited historic analyses of both shale units indicate they contain pyrobitumen and are organic-rich and overmature (i.e. experienced high temperatures and potentially within the hydrogen window) (Pangea Resources, 2016).
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	<p>The Edmund-Collier SPA comprises the western parts of the Mesoproterozoic Edmund Basin and the overlying Collier Basin (1679–1067 Ma), which together lie along the central part of the Proterozoic Capricorn Orogen.</p> <p>The shallower parts of the northern basin margin have been targeted for shale-hosted exhalative mineralisation (lead-zinc) by previous explorers in both the organic-rich Blue Billy and Discovery Formations.</p> <p>Thermogenic hydrogen from organic source-rocks forms during hydrocarbon generation, but importantly continues well after the hydrocarbon gas window</p>

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		<p>begins to close at around 250°C. With increasing temperature due to continued burial, the degraded organic matter and pyrobitumens produced during hydrocarbon generation continue to release hydrogen through a metagenesis process until graphite is ultimately formed. This process also matches the temperatures and results at which laboratory experiments and petrochemical processes used to generate hydrogen-stock are currently observed.</p> <p>The detection of helium can either be by the decay of radiometric rich rocks and/or from deep primordial source. Further work is required to confirm the origin.</p>
<b>Drill hole information</b>	<p>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:</p> <ul style="list-style-type: none"> <li>○ easting and northing of the drill hole collar</li> <li>○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>○ dip and azimuth of the hole.</li> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> </ul> <p>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.</p>	<p>Contained in the body of text.</p>
<b>Data aggregation methods</b>	<p>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.</p> <p>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</p>	<p>Not applicable.</p>

Criteria	JORC Code explanation	Commentary
	<p><i>some typical examples of such aggregations should be shown in detail.</i></p> <p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	
<b>Relationship between mineralisation widths and intercept lengths</b>	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><i>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').</i></p>	Not applicable.
<b>Diagrams</b>	<p><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></p>	A representative cross-section and plans of drillhole locations have been provided in the body of the report.
<b>Balanced reporting</b>	<p><i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practised avoiding misleading reporting of Exploration Results.</i></p>	Commentary and diagrams include all key inputs for balanced reporting.
<b>Other substantive exploration data</b>	<p><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></p>	<p>10GA-CP2 seismic reflection line acquired in 2010 and was 180 kilometres in length. The seismic line was part a subsection of a broader survey named 'The Capricorn Deep Crustal Survey' (totalling 581 line km's). The greater survey traverses the entire Capricorn Orogen under a collaboration with Geoscience Australia, the Geological Survey of Western Australia (GSWA) and AuScope Earth Imaging (a component of NCRIS).</p> <p>The processed data and images were made available to industry in 2011 and readily available on Geoscience Australia website or WAPIMS.</p> <p>10GA-CP2 seismic line transects the company land portfolio and provides valuable insights to the subsurface geology.</p> <p>The reprocessing of the open file seismic data from 10GA-CP2 was undertaken by Howman Seismic and</p>

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		<p>Thunderstone Energy, focussed on optimising the resolution in the top 4 kilometres of the seismic section.</p> <p>The migrated high-resolution imagery obtained has greatly enhanced the geological detail that can be extrapolated along the section including formation architecture, basin depth and the <u>plotting</u> major faults boundaries in the top 5 kilometres.</p> <p>The interpretation of the resultant imagery was undertaken by consultants from Good Earth Geological Consulting and Thunderstone Energy along Seismic line 10GA-CP2.</p> <p>GSWA geological information quoted in the body of the text is sources from 1:100000 Ullawarra Geological Map Sheet – 2151.</p> <p>Geological mapping and logging of drillholes within SPA-AO-0116 identifying bituminous sandstones reported in the body of the text were sourced from a detailed open file technical report (WAMEX Reference A54569) compiled by RIO TINTO in 1998 and cross checked of relogging of publicly available diamond holes in the area by Good Earth Consulting.</p>
<b>Further work</b>	<p><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></p> <p><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></p>	<p>Further work is planned as stated in this announcement.</p>