ASX ANNOUNCEMENT
20 December 2024

NATURAL HYDROGEN LAND POSITION EXPANDED IN WESTERN AUSTRALIA

Constellation Resources Limited (the "Company" or "Constellation") is pleased to advise that its 100% wholly owned subsidiary CR1 Energy Pty Ltd has been informed that three Special Prospecting Authorities with an Acreage Option ("SPA-AO") have been accepted. These applications, over the Ashburton Basin area of Western Australia, are considered to be prospective for natural hydrogen, helium and associated gases and adjoin the Company's existing Edmund-Collier SPA-AO project area.

HIGHLIGHTS

- The Company's total natural hydrogen project area expanded to 87,602km^2 via three new SPA-AOs covering a total of 31,410km^2 over the Ashburton Basin.
- The Ashburton Basin SPA-AOs adjoin the Company's existing Edmund-Collier SPA-AO project area and are intersected by the Goldfields gas transmission pipeline, offering a potential solution to market should a discovery occur.
- The area exhibits the critical elements needed for a hydrogen-helium system including regionally extensive diversity of potential source-rocks and deep fault-zones for migration into overlying reservoirs of Neoarchean–Proterozoic basins — including the Ashburton and Bresnahan basins.
- Global hydrogen demand is expected to grow fivefold by 2050. Current hydrogen consumption is mainly sourced from grey Hydrogen (produced by natural gas) and the search for and uses of a zero-carbon source of hydrogen is gathering momentum worldwide.

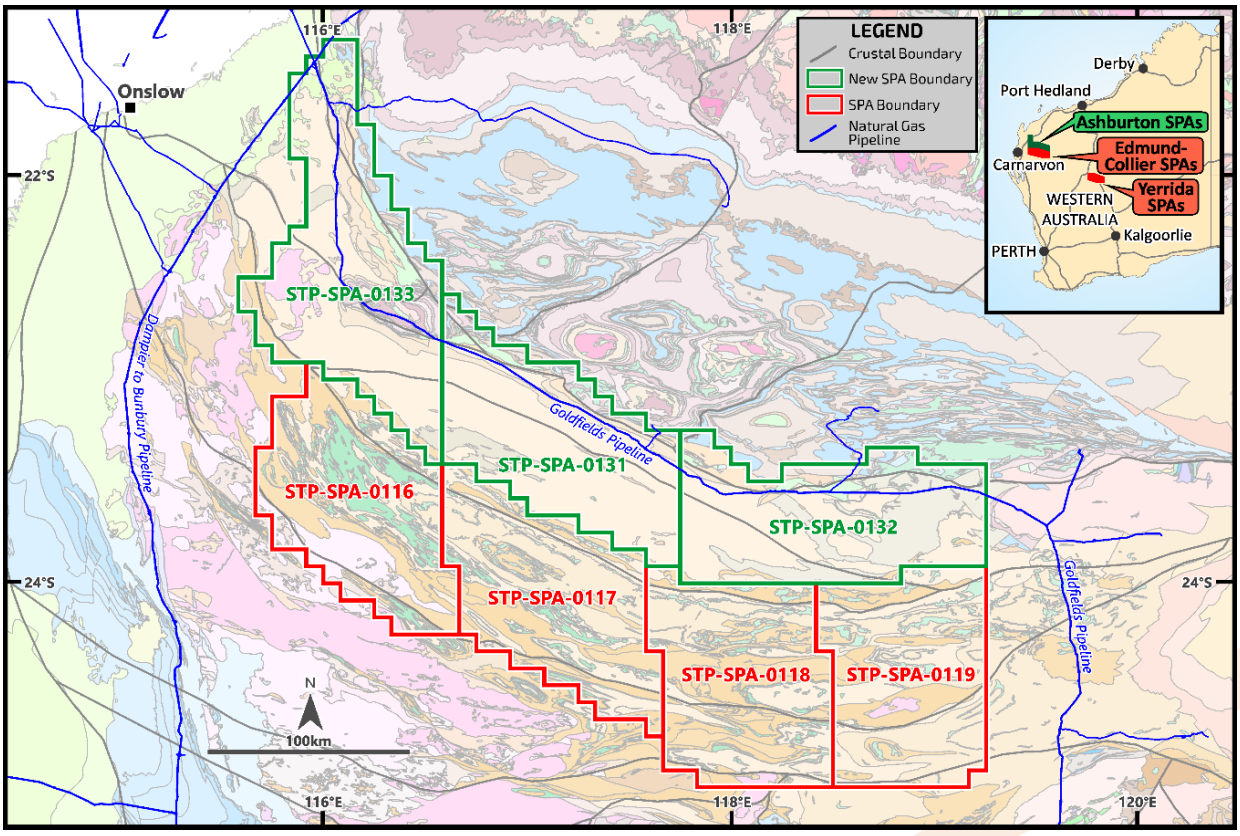

Figure 1: Ashburton Basin STP-SPA-0131-0133 Application Locations (highlighted in green).

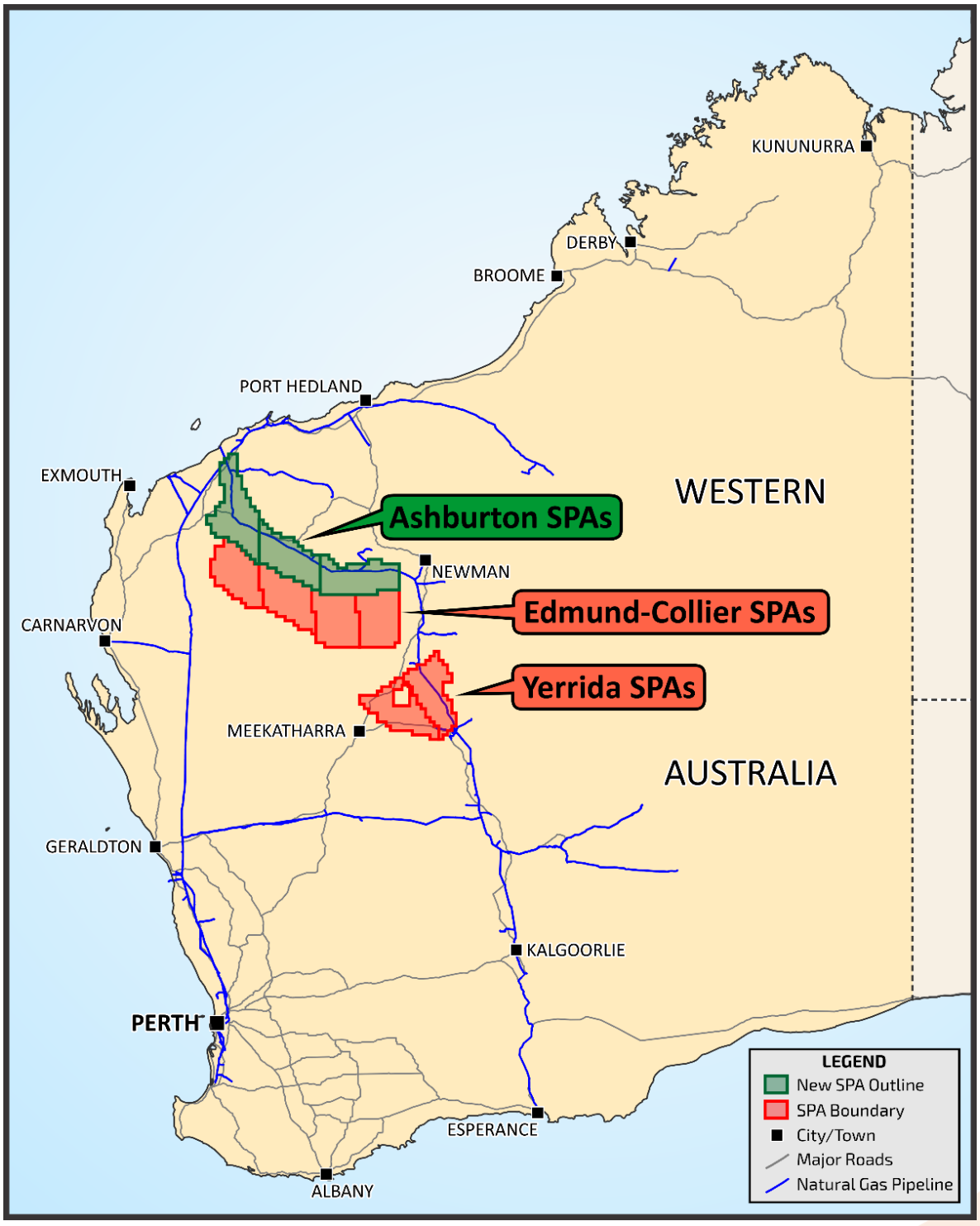

Figure 2: Constellation SPA-AO Application Locations.

For further information, please contact:

Peter Woodman
Managing Director
Tel: +61 8 9322 6322

Peter Muccilli
Technical Director
Tel: +61 8 9322 6322

SPA-AO APPLICATIONS FOR NATURAL HYDROGEN

The Company has been advised that it had been conditionally accepted as the preferred applicant for a further three contiguous Special Prospecting Authorities with an Acreage Option ("SPA-AO") applications (STP-SPA-0131-0133) over the Ashburton and Bresnahan basins (located within the Southern Pilbara/Capricorn Orogeny area), a cumulative area of 31,410km^2. The new SPA-AOs complement the Company's existing SPA-AOs over the Edmund-Collier and Yerrida Basin areas, expanding the total natural hydrogen project area to 87,602km^2 in Western Australia. The Ashburton Project is located north of the Edmund-Collier SPA-AOs with the Goldfields gas transmission pipeline running along the east west spine of the project area (Figure 1 and 2).

Constellation considers that it has selected the most prospective large-scale basin opportunities for hydrogen, helium and associated gases that will give it a first mover advantage in the search for natural hydrogen in Western Australia. Once a granted SPA-AO is received, the proposed exploration work programs in the application areas draw on the ideologies behind 'first-mover advantage' — where the largest discoveries in an unexplored field for either metals or petroleum are usually shallow and found early in the field's history.

The Company's underlying technical assumption is that the largest and most viable hydrogen and helium gas accumulations will likely leak at the surface. Thus, the identification of anomalous gas seeps or 'invisible gossans' can be achieved utilising low-cost and simple but sophisticated detection techniques to assess the prospectivity of the basins.

The Company is continuing engagement meetings with relevant stakeholders (native title groups, pastoral stations, other tenement holders etc) regarding its proposed activities on the SPA-AOs and is currently targeting on ground activities to commence over the Edmund-Collier SPA-AOs in late March/early April 2025, subject to the finalisation of all land access agreements and weather considerations. Any significant anomalism will be immediately apparent as direct field gas readings are given in real time.

For further information on SPA-AO applications, processes and proposed work programs, refer to the Company's ASX announcement dated 6 March 2024 titled "SPA-AO Applications Accepted for Helium and Associated Gases in Western Australia".

ASHBURTON GEOLOGY

There is a range of prospective source-rocks for hydrogen generation within the SPA-AOs including potential generation via radiolysis of groundwater as it interacts with high heat-producing radiometric granites of the Archean Pilbara Craton basement and Paleoproterozoic Gascoyne Province. Hydrogen could also be generated by degassing of primordial mantle–core sources and from metamorphism and later oxidation of banded-iron formations (BIF) by deep basinal groundwater within the Hamersley Basin.

Secondary gases that could potentially be associated with hydrogen include helium and methane. Helium generation is most likely from the extremely long-lived radiogenic decay of uranium and thorium in Pilbara Craton and Gascoyne Province granites and possibly also from some sedimentary rocks whilst methane could be derived from the biogenic alteration of hydrogen.

Migration pathways include significant structures along lithospheric-scale crustal boundaries and their splay faults and via sedimentary aquifers. Many of these regional fault zones parallel the present-day maximum horizontal-stress direction and are in extensional orientation conducive for gas migration into nearby traps during contemporary earthquake activity. **This may also lead to surface gas leaks that are amenable for direct detection techniques.**

Several basins extend over the combined Ashburton Project — Mesoarchean (De Grey Superbasin), Neoarchean (Fortescue and Hamersley Basins), Paleoproterozoic (Hamersley, Ashburton, Turee Creek, Blair and Bresnahan Basins) — and largely outcrop as a folded succession of predominantly clastic sedimentary and mafic intrusive and extrusive rocks, crosscut by deeply penetrating fault systems that intersect heat-producing Archean granite–greenstone basement.

Numerous clastic formations are potential reservoirs, and their lithofacies and depositional settings are analogous to Phanerozoic hydrocarbon reservoirs. Basement rocks are also potential reservoirs where fractured and faulted. Regional seals include shale-dominated formations (1000s of metres thick) and BIF, and importantly mafic extrusive and intrusive units that extend across the region, akin to the dolerite seals in the Bourakebougou hydogren field.

A significant opportunity in the Ashburton Central SPA-AO is the development of multiple, kilometre scale, long-lived traps for gas accumulations, including anticlinal and structural traps, stratigraphic depositional pinch outs and diagenetic traps, and density driven hydrologic traps. Importantly, prospective fold-closures mapped at surface can be extrapolated in the subsurface in various geophysical interpretations. Numerous tectonic events and geological process are recognized that were potential drivers for gas generation and migration and for driving and rapidly focussing gas into traps.

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 approved in accordance with the Company's published continuous disclosure policy and authorised for release by the Company's Managing Director, Peter Woodman.