

The Helium squeeze is on

D3 Energy Limited (ASX:D3E) continues to represent a compelling investment case as a leveraged play on natural gas and helium projects in South Africa and Australia, perhaps even more so on the current supply crisis. The association of natural gas with globally unmatched helium concentrations gives the company a material point of differentiation versus to its listed upstream peers and we suggest a South African jurisdiction could become of increasing interest to off-takers seeking risk diversification. D3E is continuing to work through its Production Right Application (PRA) and FEED processes looking to achieve commercial resolution / project sanction on an initial production project in 2026. Planned geophysical campaigns and a new phase of drilling with positive test results could underpin a material increase in certified reserves and resources. As the gas resource is biogenic in nature and recharges, the upside case could be considered as potentially 'open-ended' on gas reserves, per well recoveries and valuation in practical terms. Of critical importance is the development plan and defined pathway to first gas. Achieving commercial definition in under two years from listing would represent material outperformance compared to peers. The industry crisis, highlighting the fragile nature of existing supply chains would add to the strategic importance of helium assets in South Africa on a global as well as local basis, noting the impending domestic gas deficit. We believe there is strong political support for new gas developments. We see D3 Energy as a niche opportunity in the global energy landscape, tapping into overlooked helium and gas plays that could be ready for project sanction around end-2026.

Business model

D3 Energy is a leveraged play on the natural gas supply growth and energy self-sufficiency strategy of South Africa complemented by world-class helium concentrations of up to 5%. The focus on the helium aspects of the play are likely to increase due to the current political crisis affecting global supply. Having submitted a PRA application, the company could be in a position to reach a project sanction by end-2026 subject to further drilling and successful FEED studies. We note the current resource certification represents only ~3% of the total Exploration Rights area. Successful FEED results would definitively establish commercial proof-of-concept and provide a platform for sequential (and potentially transformational) development to unlock the remaining tenement holdings. The economics of the play are well supported by an investment-friendly fiscal environment, very low drilling costs and a globally significant helium opportunity in an increasingly supply-constrained and higher operational risk environment where on balance, a higher base line price is not an unreasonable assumption.

The big picture is changing

Field work yet to commence but the fragile nature of helium supply and the supply chain has come to the fore. The market is rerating helium leveraged plays and whilst it may be short term, we believe a move towards global production diversification is real with South African plays likely to garner an increasing level of interest...as the most advanced, comparatively lowest-risk and highest-potential helium region in the southern hemisphere.

NAV is unchanged at \$2.28/share

Our NAV is unchanged and is set at \$193-378m (\$1.44-2.83/share) with a mid-point of \$2.28/share. The current industry supply crisis with growing interest from industry and investors, could accelerate and magnify share price movements on success case outcomes. We maintain our development outcomes benchmarked to peer-group reserves metrics, noting that **the production case is heading towards project approval validation over the next 12-18 months where the commercial potential should be strongly defined** and risk weightings transfer to construction and commissioning. The share price currently represents a market risk weighting of ~80% to our mid-point valuation.

Energy

17 March 2026

Share Details

ASX code	D3E
Share price (17-Mar)	\$0.46
Market capitalisation	\$62M
Shares on issue	134M
Cash (31-Dec)	~\$4M
Free float (LSEG)	~18.6%
Avg daily volume (12 mths)	0.16M

Share Performance (12 months)



Upside Case

- Successful further drilling and testing to materially extend the gas reserves area and helium concentrations
- Granting of the PRA and rapid progress to project sanction
- Commodity prices rise above expectation

Downside Case

- Future well results disappointing and point to more complex geology...complexity means cost
- Delays in the regulatory process push back nominal timing
- Analogue production plant under-performs

Board of Directors

David Casey	Managing Director/CEO
Greg Columbus	Chairman
Matthew Womer	Non-Executive Director
Emma Wates	Company Secretary

Company Contacts

David Casey	+61 2 8072 1400
admin@d3energy.com.au	

RaaS Contact

Andrew Williams	+61 417 880 680
andrew.williams@raasgroup.com	

Strategically Positioned For The New Helium Landscape

A sharp shock to the global equilibrium immediately highlights how fragile the helium supply chain is. The current Middle East conflict, particularly attacks affecting Qatar's Ras Laffan LNG infrastructure, has removed a massive share of global helium from the market, triggering an immediate supply squeeze, price pressure and uncertainty across industries that are particularly dependent on ultra-pure helium. For us, it specifically highlights the risks associated in an industry where supply is overly concentrated in politically sensitive regions (Middle East and Russia) and with limited transport logistics (i.e. the Strait of Hormuz). We postulate as to whether current events can be a catalyst for the acceleration of the development of alternate supply sources...it likely should be given the magnitude of the commercial impacts in such an immediate time frame begs for diversification. It's against this background that the commercial helium potential of South Africa stands out, particularly in the Free State Province where production has commenced, albeit at an initial small scale, helium concentrations are high (2-12%), in field costs are low (shallow wells) and the source is biogenic and 'renewing'. Although the volumetric potential of South Africa in helium terms is small on a global basis, the helium yields are unmatched and projects could deliver significantly commercial returns even at a limited scale. We continue to see D3 Energy Limited (ASX:D3E) as a compelling investment case for new gas production with the potential to deliver material re-rating events through 2026 on the anticipated granting of its Production Right Application and completion of FEED. If there is a time for markets and industry to focus on next generation supply options, then it is now, where the critical and fragile nature of the global supply chain is evident. The macro-operating environment should strongly support the economic case for new gas production, which in our view, could potentially see initial production for D3E in 2027. The 'renewing / recharging' nature of the helium resource suggests the value upside could potentially be considered as "open-ended". The company is intending to return to the field for further geophysics in support of a drilling campaign from mid-year. Importantly, results from the campaign should better define FEED results, particularly through production rates, likely upgrading of reserve and resource attributions and advancement of gas sales. The company also continues to progress partnering discussions on its farm-out of PELs -121 and -122 in South Australia, which contains the drill-ready Hydrohelix prospect.

Lassonde Curves outline the value uplift potential

We have applied Lassonde Curve Theory ([refer to commentary on p.9](#)) as a cross check to our current success case D3E NAV estimate (~\$190-375m) and to indicate the potential value uplift that could be ascribed to the company upon achieving an independent and optimised development project.

We would normally only undertake this type of longer-term speculation on a qualitative basis, however, the current political events suggest the potential for significant changes in the prevailing industry paradigm (new helium sources and supply chains) are likely to be required and acceleration of development / growth timelines is not an unreasonable outcome to assume.

Lassonde Curves postulate that over the life cycle of a small resources company, the success case from a conceptual exploration / appraisal play to production, could deliver a 'value' multiplier of 10—100(+)x. It's a wide range with numerous discretionary assumptions and caveats, but not overly speculative based on say, a 2-3x compounding value uplift on progression through the derisking stages.

Our current NAV at \$2.28/share at the mid-point (\$305m) represents a <5x uplift versus the current capitalisation (\$0.485/sh | \$65m capitalisation), which is not an unrealistic uplift and perhaps understated, for a company currently in pre-FEED or close to.

We caution that any forecasts in valuation will not translate to share prices on a (1:1) linear basis given the strong likelihood of material equity financing at prices at a discount to NAV.

Assuming the current capitalisation is the new 'value' base-line, a conservative Lassonde Curve uplift, closer to the mid-point of the independent ranges, would represent a NAV ~\$1,350m of some 20x...but that is longer-term speculation.

[Visualizing the Life Cycle of a Mineral Discovery - Visual Capitalist](#)

Global Helium Production Needs New Pathways

We're not aiming to evaluate the current Middle East conflict in terms of its economic impacts or as a detailed look-through to specific helium sensitive industries, but rather to highlight issues related to the current supply chain characterised by a limited number of producers, dominated by even fewer operators, in an industry with high barriers to entry operationally and financially versus a demand forecast for material growth over the medium to long term.

In doing so, we will address what appears to be a critical need for supply diversification. Financial theory states that 'diversification equals less risk' and within this context, we **revisit where South African helium developments and D3E in particular can make a potentially significant impact.**

The conflict has had an almost immediate effect on helium prices and supply, highlighting how sensitive the supply chain is, particularly on Middle-East leveraged commodities and perhaps how inured markets and industries have become to the politically fragile nature of the region as a whole.

The helium market has demonstrated its particular sensitivity to supply disruptions. The shut-in of the North Field LNG project (Qatar) which produces 35-38% of global supply, with a declaration of force majeure, has impacted helium dependent industries, with anecdotal data suggesting He prices have risen significantly.

This is a logical outcome as even in the absence of specific and current pricing data, the combination of 'sudden' supply loss, increased shipping risks and lack of alternative sources, points strongly to significant upward price pressure in the short-term and we suggest, the potential imposition of allocation / rationing controls.

We do not suggest that South African projects will become the dominant global supplier, but would highlight that given the materially favourable helium grades, the economics can be attractive as a potentially stable and high-grade source of supply even at a limited scale.

A recipe for rising prices in a market built on contracts, not transparency

Helium markets operate very differently from most commodities.

Most supply is sold through long-term contracts rather than a transparent spot market, meaning price signals often emerge slowly even as supply tightens.

The opaque nature of the market makes price discovery difficult, but signs of rising prices on tightening supply have already begun to emerge, even if only anecdotally.

Gas World, an industrial gas trade publication, reported that "prices could rise by up to 50%, particularly for buyers without long-term supply contracts" due to the halt in Qatar Energy's helium production.

"...(i)n a sustained disruption, prices could rise sharply and potentially retest past shortage peaks of more than US\$2,000/mcf."

Qatar is important, being the worlds' biggest supplier outside of the US with helium extracted as a byproduct of gas processing...when LNG production stops, helium production stops.

In addition to attacks on the processing infrastructure the critical shipping route through the Strait of Hormuz, has been compromised, **further complicating supply logistics.**

"...(i)t takes about 3 weeks for helium to go from container-filling stations in Qatar to delivery at a customer's facility.

"...prolonged instability could impact chip production, energy costs and global supply chains. While some companies have secured alternative sources, the industry remains exposed to geopolitical shocks.

Helium is indispensable in semiconductor manufacturing with no known substitute.

...threaten(ed) access to this gas, (creates) potential bottlenecks in the global chip supply chain. The situation reflects how disruptions in specialised materials can cascade into broader industry challenges.

...South Korea is highly vulnerable to raw material disruptions".

Scientific research and medical imaging (MRI systems, cryogenics and high-energy physics labs) depend on ultra-pure helium. These sectors typically have strategic reserves but may face **rationing** if the crisis persists.

Anecdotally, distributors are already signalling **tightening allocations**.

Helium cannot be synthesised economically and alternative suppliers (U.S., Algeria, Russia) cannot rapidly scale to offset Qatar's sudden outage.

[Iran war threatens global helium supply](#)

[Helium supply confidence rocked by Gulf conflict | Helium | gasworld](#)

[Qatar Helium Halt Threatens Global Chip Supply Amid Iran Conflict - Seoul Economic Daily](#)

[Middle East tensions threaten chip material supply](#)

[Helium prices soar as Qatar LNG halt exposes fragile supply chain | Reuters](#)

[Helium Gas News | Gases | gasworld](#)

An increasing focus on helium opportunities in South Africa

Refer to our initiation report^[A] for a more detailed overview of projected helium demand growth.

We suggest that helium exploration in South Africa sits in a somewhat strategic position right now. When a global supply shock hits, especially from geopolitical risks, capital and offtake partners start looking for **alternate jurisdictions with potentially long-life, non-LNG-linked helium resources**. South Africa fits that profile unusually well.

Most of South Africa's prospective helium, particularly in the Free State, comes from deep crustal sources with high concentrations and whilst it's associated with natural gas production, it is not linked to LNG processing at scale. Helium grades have been recorded at exceptionally high concentrations compared to global averages.

Essentially that translates to being decoupled from LNG economics **and insulated from the fragility of Middle East politics and issues**. This operational independence emerges as a potential premium feature.

The short-term industry reaction could eventually result in an upwards shift in base-line pricing, even if only by extension of the necessity to underwrite new projects through offtake contracts under premium terms. Given the early-stage nature of helium evaluation and development in South Africa, any shift upwards to global pricing would naturally **improve project economics through –**

- ...better netbacks on long-term offtake agreements,
- ...more interest from industrial gas majors seeking diversification and;
- (likely) improved financing conditions for early-stage development.

Even modest price increases can materially improve the economics of small-to-mid-scale helium projects as we'd expect operating costs to remain relatively stable while revenue is naturally, price sensitive.

It would be an interesting point of debate, but we suggest **jurisdictional stability could become a selling point**. Whilst South Africa has its challenges on an independent basis, in comparison with the Middle East and Russian supply uncertainty, it may be considered as representing a materially **lower-risk alternative** for buyers requiring long-term reliability.

We believe that off-takers will increasingly seek geopolitical diversification, not just volume alternatives.

Could South Africa provide a faster path to market than alternatives?

Emerging helium regions like Tanzania or even parts of North America (US and Canada), have notional development timeline projections, considered to be long-dated on issues related to geology, regulatory hurdles and infrastructure limitations.

South Africa by contrast offers a significantly faster path to market on the basis that it is already producing helium (Virginia Gas Project), with proven and favourable geology, at least a minimum of established infrastructure and a mature regulatory framework.

Helium processing infrastructure can represent a potential choke-point to companies in a pre-development stage given small companies are often capital constrained and helium production does require a cryogenic process with potentially high associated capital and operating costs.

We suggest that South Africa’s infrastructure base, whilst improving can be considered somewhat bottlenecked at the current time with only one plant (Virginia) in operation. However, we note the operators’ [ASP Isotopes (NASDAQ:ASPI)] Phase 2 ‘quantum’ growth plans to expand production of LNG to ~625 td (from ~50 td) and He to ~894 mcf (from 0.1mcf per day [50kg])^[A].

The production growth target may provide not only a working development analogue, but also an earlier and less capital-intensive path to first production for D3E representing an acceleration opportunity for Phase 2 and a high-margin revenue stream for D3E well head gas sales.

Whilst South Africa and US are current producers, South Africa is considered to have material growth potential versus the US where output is dependent on legacy assets with undefined growth potential. Projects (ex-South Africa) are considered as still being in the early exploration, proof-of-concept phase. All of this could be considered as somewhat conjectural but at least sets a platform for benchmarking.

Tanzania is considered promising but too early-stage and North American frontier plays face slower permitting and lower grades.

For example, the Helium One (LSE:HE1) Tanzania, Rukwa Basin project is still in the discovery to feasibility transition stage compared to **D3E that can be considered to be in a late-resource definition – pre-development stage.**

When the global market is in distress - speed matters.

Those companies with existing wells, potential access to pilot plants or plants with modular development expansion options can move more quickly into production...and that **very much describes the D3E position in the South African market.**

However, there are real constraints to keep in mind including but perhaps not limited to -

- **Potential Infrastructure bottlenecks** - helium processing requires purification, liquefaction, cold-chain logistics and export pathways.
- **Regulatory and permitting timelines** - whilst comparatively stable, the regulatory process in South Africa (well, anywhere in a practical sense) can be slow. Investors will want clarity on tenure security, environmental approvals and gas marketing rights.
- **Capital intensity** - helium processing infrastructure can be expensive and raising capital in a volatile global market requires strong technical data and credible development plans.

The ‘benefits(?)’ though for South African helium explorers is that this global helium shock has the potential to provide a tailwind, elevating South Africa from a niche play to a strategically important alternative supply region.

Exhibit 1: Anecdotally South Africa ranks more favourably as next generation He supply

	South Africa	Tanzania	Emerging North America
Current production	Virginia Gas Project	No	Mostly legacy gas fields
Regulatory maturity	High	Low(?)	High but slow Lengthy environmental permitting and land access challenges
Infrastructure readiness	Strong(?)	Weak	Strong but costly
Helium grade	Very high	High but unproven at scale	Low-medium ...require larger plants for greater throughput ...more capex
Project pipeline	Advanced(?)	Early – require more drilling	Mixed
Time to start-up	Short(?)	Long In exploration / appraisal stage and yet to demonstrate commercial scale flow rates or long-term deliverability	Mid to long Emerging plays still in pre-development phase or not yet producing at scale

Source: RaaS commentary. Various publications as noted below

Many helium leveraged industries (semiconductor, medical imaging, cryogenics and space / defence sectors) value **purity and reliability** over sheer volume. Explorers that can demonstrate consistent high-grade output have a greater probability of securing premium contracts.

In summary - South Africa's leading helium play operators (**D3 Energy** and ASP Isotopes) have collectively, largely completed their appraisal drilling campaigns, already have certified reserves, submitted production right applications and operate processing infrastructure with quantum expansion plans and opportunities.

[South Africa's Bold Bid to Become a Global Helium Supplier Faces Early Hurdles and High Hopes – Africa Projects Magazine](#)
[Helium One Global receives offer of Mining Licence for southern Rukwa Helium Project, Tanzania | African Mining Market](#)
[Helium One: Frontier Explorer Targeting Critical Helium Supply Crisis | IG South Africa](#)
[South Africa Joins Global Helium Production: Reergen's Groundbreaking Advances and Helium Market Trends - Delphos](#)
[Global Helium Market Report 2025-2035: New Helium Projects Under Development in Canada, Tanzania, and South Africa Offer Potential Supply Diversification - ResearchAndMarkets.com](#)

The Natural Gas And Helium Potential Of The Free State

The Free State Province contains South Africa’s only proven commercial helium province, with production underway from the Virginia Gas Field. It is the most advanced and commercially de-risked helium region in Africa, confirming globally significant high-grade helium and large-scale methane and transformational resource expansion. The natural gas resource provides the underlying platform for production and growth options.

The gas system is microbial/biogenic methane, generated from circulating groundwater interacting with bacteria and migrating through a major fault system. The helium originates from radiogenic decay of basement rocks and this system is continuously renewing, unlike finite thermogenic gas fields.

Helium grades are amongst the highest globally, with multiple wells across the basin area, historically reporting 2–12% helium.

As previously commented the Virginia Gas Project is progressing its Phase 2 expansion throughput plan^[8], targeting an “...increase [in] LNG output to ~625 td and He to ~894 mcf/d.”

D3E’s acreage sits on the same structural trend as Virginia with its drilling and workover results confirming the broader regional potential and validating the play, with the helium system extending into its tenement portfolio.

The early results, through the testing of historical wells has delivered high-grade helium and commercial methane flows.

The Free State has a first-mover advantage over alternate projects in Tanzania, Namibia and even North American through existing Infrastructure...cryogenic helium liquefaction facilities already built and an emerging pipeline network, although restricted to field gathering systems at this stage.

Exhibit 2: Benefits and advantages abound...it’s the place to start-up on strong economics

	In place	
Helium Grade	2 – 12% D3E’s tenements averaging 4-5% helium	Well in excess of global averaging from currently producing projects.
Gas type	Biogenic	Renewable and low carbon.
Commercial status	Currently producing helium and LNG from the Virginia Gas Field	Only African region with commercial production.
Infrastructure	Operating plant with 52km of gas gathering pipelines	Unique in Africa and a material first mover advantage.
Expansion potential	Very high – D3E has already extended the play footprint	Evidenced by the Phase 2 plan for the Virginia Project and material progress being made by D3E through its own commercialisation strategy – first gas in 2027(?).
Operators	ASP Isotopes, D3 Energy	Growing basin interest with potential for new partners.

Source: RaaS commentary; Various publications as noted below

Small but globally strategic

Determining prospective resources associated with current and potentially future project developments is somewhat fraught from the perspective of publicly available information and a common certification base. There is also the added complication (in a positive sense) of Free State gas resources being ‘renewing’ although the asymptotic rate, the rate at which gas production equals generation, has yet to be determined.

We can compare across jurisdiction but estimates need to be considered as perhaps only accurate in terms of ‘order of magnitude’ comparison rather than specific numbers.

The commercial advantages provided by Free State helium concentrations clearly demonstrates why development options in this region could deliver potentially excess returns even at small scale. The helium yield per mcf of gas is orders of magnitude greater than current global production projects.

Free State is one of the few pure-play helium systems, whereas Qatar, Russia and the US produce helium as a by-product of enormous gas fields - the Free State is one of the only places where **helium can be the primary value driver**.

The quick takeaway –

...world-leading in helium concentration, one of the only commercially viable small-volume helium systems and strategically important because of purity, grade and geopolitics.

On a nominal value basis, a 3–4 Bcf helium resource at 5% grade can generate more helium revenue per unit of gas than a 300–400 Bcf helium resource at 0.1% grade.

Exhibit 3: Small in volume but grades suggest ‘punching above its weight’

Region	Helium		Comments and assumptions
	In place	Grade	
Russia “undeveloped”	3,400 – 10,100 Bcf	0.2 – 0.6%	Gas reserves = 1,688 Tcf He concentration based on Eastern Siberia data. He resource is orders of magnitude larger than any other country.
Qatar “fully developed”	340 -430 Bcf	0.04 – 0.05%	Gas reserves ~850 Tcf He concentration based on North Field data. Qatar is the world’s largest helium exporter with a potential resource in the hundreds of Bcf, but very low concentrations require gas production at scale (Ras Laffan LNG).
US “mature, declining”	600 – 1,900 Bcf	0.1 -0.3%	Gas reserves = 625 Tcf He concentrations based on key fields being Hugoton, Panhandle and La Barge Historically and in aggregate, the world’s largest helium producer and whilst the prospective volume is large, development economics look challenging at (pre-crisis) prices.
Free State (SA) “emerging, high grade”	2.5 – 4 Bcf	2 -12%	Assuming a ‘basin wide’ model. Tiny in absolute volume, but exceptional in concentration and deliverability.

Source: RaaS commentary. Various publications as noted below

The Value Curve For D3 Energy

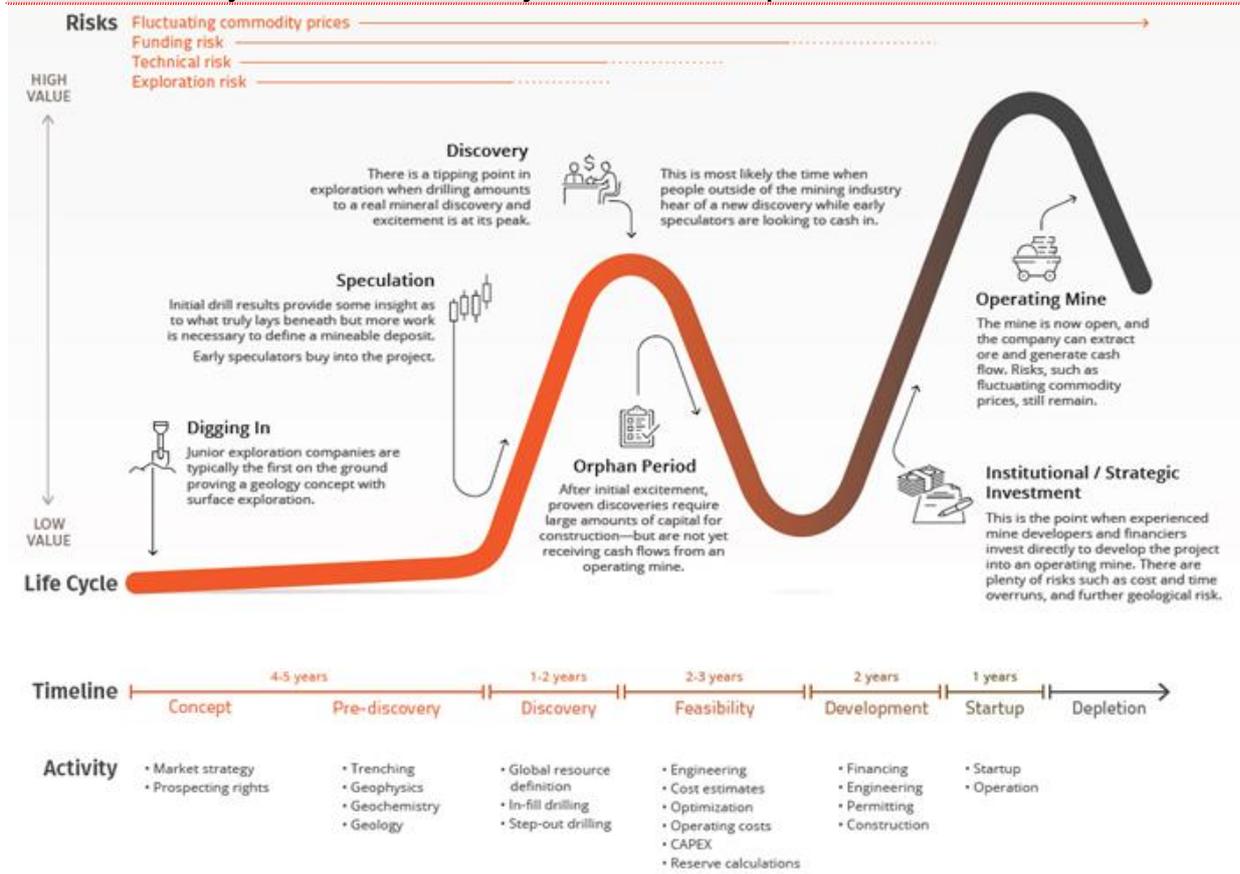
The current crisis has brought increased attention and perhaps fresh eyes to the South African helium investment story, particularly D3E given its position as an emerging (potential) producer, although still on the nominal ‘low point’ of the value curve pending further and material de-risking outcomes.

We apply Lassonde Valuation Curve theory as a framework to map where D3E currently sits on the curve and what the upper limits to value accretion may be. Lassonde Curves have typically been used as a valuation guide (forecast?) for small (mostly mining) companies on the path from exploration to production.

The model sets an intuitive framework noting value accretion and indicative market pricing using the “...psychology of investor risk appetite mapped onto the technical milestones of a resource project.” It’s not geology, it’s not finance, it doesn’t predict anything other than directionality with broad nominal value uplift ranges at each stage as per **Exhibit 4**.

For emerging minerals companies (helium, lithium, rare earths, graphite, hydrogen-adjacent gases), it can at least be a guide as to what investors need to see in terms of derisking events.

Exhibit 4: ‘The lifecycle of a mineral discovery’ ..there’s material upside to be delivered on the value curve



Source: [Visualizing the Life Cycle of a Mineral Discovery - Visual Capitalist](#)

We caution that the timeline as denoted is indicative only, with D3E for example in a pre-feasibility phase less than two years from listing.

Where D3E sits on the Lassonde Curve

Based on publicly reported progress, we see D3E as positioned in the “Discovery → Resource Definition / Pre-Development” zone of the Lassonde Curve. This is supported by the maiden reserves certification, successful appraisal drilling and production right application, all of which are indicators of the mid-curve value-creation stage.

This suggests that value accretion is typically rising but still somewhat volatile, with major re-rating potential tied to permitting, development funding, and first production.

We would highlight that the curves point to a range of value uplift outcomes on delivery of each subsequent phase that may not or are could be considered unlikely to translate to equivalent share price levels given the most likely need for smaller companies to raise potentially material operating and development capital through equity issues.

The magnitude of any uplift will also be dependent on the events at the macro level such as commodity pricing, cost of debt financing, diversification strategies and density of competing projects heading along parallel development pathways.

We'd also caution that the absolute translation, will be sensitive to many project specific factors, particularly scale and complexity.

Exhibit 5: Intrinsic uplift as risk unwinds that can aggregate to transformational value returns

	Lassonde Stage	D3E Status	Range Uplift Stage independent	Range uplift Aggregate	
A-B	Concept to discovery	Passed	2 - 3x		Generally driven by macro investment story, sovereign risk and early technical results.
C	Discovery (resource definition)	Partially priced in	2 - 4x	4 - 12x	Driven by appraisal outcomes, above expectation grades, first resource data. Typically retail speculation dominates and capitalisation can exceed 'fundamentals'.
D	Feasibility	12 -18m	1.5 - 3x	6 - 36x	Essentially in a pre-development stage (FEED) where the market can begin to model cash-flow and register transitions towards institutional / longer-term shareholders.
<i>This where we suggest the company lies – straddling the transition from 'discovery to feasibility' if not tilted towards towards the latter.</i>					
E	Development		1.5 - 2x	9 - 72x	Project sanction taken with financing, path to market and sales agreements completed.
F	Start-up	2027 -2028	2x	18 - 144x	<i>The 'aggregate' level of uplift would be sensitive to scale, commodity price outlook, growth opportunities and perhaps even a M&A premium.</i>
G	Production through depletion				<i>Company would trade on financial statement metrics and NPV calculations.</i>

Source: [Visualizing the Life Cycle of a Mineral Discovery - Visual Capitalist](#) ; RaaS commentary

In broad terms, the theory underlying the Lassonde Curve mirrors our valuation methodology, where the NAV at any point represents a risk-weighted success-case outcome.

Our risk weightings are discretionary and reflect the commercial timeline and project definition of the reserves / resources base as we see it.

Delivering commercialisation events (unwinding risk) would improve the valuation success case and 2026 field activity has the potential to deliver further progress to the point where the **basis of valuation can shift from a pre-development, weighted gas-in-ground model, to a defined project NPV extrapolated through the bankable 2P gas reserves and value becomes a probability equation.**

Assigning values to early-stage volumes is subject to potentially material change on field and engineering results, with D3E holding alternative pathways to first gas sales and the unique nature of gas estimates by virtue of the **biogenic nature of the gas resource (recharge) which likely understates the gas potential as measured.**

The rechargeable nature of the gas generation provides upside to any “spot” analysis, subject to the determination of the asymptotic production level of wells – the rate at which production equals recharge.

Importantly, the valuation range is not static and is subject to material change both positive and negative through the remaining development and commissioning, and growth processes.

Given the notional size of the acreage and resource base, the rolling NAV **could perhaps be considered as somewhat open-ended and likely to continue to lead the share price.**

Exhibit 6: The NAV range continues to represents a material premium to the market price

	Pr	Risky range (A\$m)			
		Low	Mid	High	
PRA	75%	\$32	\$99	\$131	'P' reserves although small and nominally pre-commercial. The reserves represent only ~10% of ER 315.
ER 315					
Contingent Resources	30%	\$143	\$183	\$219	Based on a risk-weighted value multiplier assuming conversion of 'C' to 'P' and a commercial outcome.
Other assets		\$20	\$25	\$30	Nominal only - includes permits (ex-ER 315), technical study areas and South Australian holdings.
		\$195	\$307	\$379	
Net cash/(debt)			\$4		As per Half Year Financial Report [1]
Corporate			(\$5)		
TOTAL		\$193	\$305	\$378	
Ordinary shares (m)	134	\$1.44	\$2.28	\$2.83	

Source: RaaS analysis; risky ranges based on discretionary RaaS adjustments

We have left the NAV unchanged noting the closing share price of \$0.46/share (16-Mar) represents a 70% discount to the low end of the NAV range and in isolation can be considered a risk weighting of ~80% to the mid-point value of the South African assets only.

We highlight that discounts of this magnitude are not unusual in the small-cap energy space as supported by the Lassonde Curve comparison.

Through 2026, positive results from the pending drilling phase could drive potentially material upgrades to (bankable) reserves. Commercial definition on completion of FEED, could more than offset further issued capital dilution. We caution that at some point the company will need to secure further financing.

FEED completion is the low-hanging fruit realising confirmation of project design selection (stand-alone infrastructure or third-party access), on securing gas offtake commitments and further demonstration of the gas extent and productivity.

Exhibit 7: Initial gas reserves / resources – we expect 'P' volumes to grow in 2026

Bcf	Reserves			Contingent Resources		
	1P	2P	3P	1C	2C	3C
Gross gas	7.21	14.43	22.97	329	533	835
<i>Gas composition</i>						
Net helium (He)	0.353	0.706	1.124	13	22	34
Assumed He conc.		5.6%			4.1%	
Net methane (C1)	5.45	10.91	17.36	286	464	727
Assumed C1 conc		86.5%			86.7%	

Source: Company data

Note Reference	Document Ref	RaaS Reports	Date Published	Title
	[A]	D3E RaaS Initiation Report	17-09-2025	Natural gas and helium - nothing to laugh at
	[B]	D3E RaaS Update Report	23-02-2026	Seeking commercial definition through 2026
Data referenced in this Report				
[1]		D3E ASX release	13-03-2026	Half yearly report and accounts

All financial data in Australian currency unless otherwise specifically stated

FEED	Front End Engineering and Design	kb (d)	thousand barrels (per day)
FID	Final Investment Decision	Mb	million barrels
SPA	Sales and Purchase Agreement	Bb	billion barrels
PEL	Petroleum Exploration Licence	mcf (d)	thousand cubic feet (per day)
PEP	Petroleum Exploration Permit	mmcf (d)	million cubic feet (per day)
EP	Exploration Permit	Bcf	million cubic feet
LNG	Liquified Natural Gas	Tcf	trillion cubic feet
		gj	gigajoules (mcf equivalent)
		TJ	terajoules (mmcf equivalent)
		PJ	petajoules (Bcf equivalent)
		boe	barrel of oil equivalent
		mmBtu	million British thermal units (TJ equivalent)

Conversion factors – note conversion factors may vary from company to company and project to project

Gas	cubic feet to joules	=	1.06	1 Bcf	=	1.06 PJ
	joules to boe	=	0.163	1 PJ	=	0.163 Mboe
	mmBtu to joules	=	0.952	1 mmBtu	=	0.952 TJ
Oil				1 barrel	=	1 boe
Condensate				1 barrel	=	0.935 boe

Reserves and resources classification

1,2,3 P	Proven, probable and possible reserves certified as being likely to be in production within five years 1P = 90% confidence limit; 2P = 50% confidence limit; 3P = 10% confidence limit
1,2,3 C	Contingent resources. As above but nominally higher risk in terms of commerciality; 1= Low, 2 = Best, 3 = High
1,2,3 U	Potential Resources. Largely undefined by drilling and testing. Classification; 1 = Low, 2 = Best, 3 = High
CCS	Carbon capture and storage
CH ₄ / C1	Methane (natural gas)
CO ₂	Carbon dioxide
CO ₂ -e	Carbon dioxide equivalent
H ₂	Hydrogen
He	Helium
EUR	Estimated Ultimate Recovery

Exhibit 5: Financial Summary

D3 ENERGY LIMITED		D3E					
YEAR END		Jun					
NAV	A\$m	\$2.28					
SHARE PRICE	A\$cps	\$0.460		close of trading	16-Mar		
MARKET CAP	A\$m	62					
ORDINARY SHARES	M	134					
OPTIONS	M	27					
nm = not meaningful na = not applicable							
RATIO ANALYSIS		FY24	FY25	FY26E	FY27E		
Shares Outstanding	M	121	121	134	134		
EPS (pre sig items)	Acps	(4.95)	(3.38)	(1.97)	(1.76)		
EPS	Acps	(4.95)	(3.38)	(1.97)	(1.76)		
PER	x	na	na	na	na		
OCFPS	Acps	(0.02)	(0.03)	(0.03)	(0.02)		
CFR	x	na	na	na	na		
DPS	Acps	na	na	na	na		
Dividend Yield	%						
BVPS	Acps	0.11	0.08	0.05	0.07		
Price/Book	x	3.1x	4.2x	7.1x	4.7x		
ROE	%	na	na	na	na		
ROA	%	na	na	na	na		
(Trailing) Debt/Cash	x	na	na	na	na		
Interest Cover	x	na	na	na	na		
Gearing dn/(dn+e)		na	na	na	na		
EARNINGS		A\$000s	FY24	FY25	FY26E	FY27E	
Sales							
Corporate and admin		(1,416)	(1,187)	(1,997)	(2,000)		
Exploration expense		(881)	(1,775)	(750)	(375)		
Employee benefits		(497)	(840)				
Share based payments							
DD&A		(25)	(23)	(23)	(23)		
EBIT		(3,518)	(4,083)	(2,627)	(2,356)		
Profit/(Loss) before tax		(3,518)	(4,083)	(2,627)	(2,356)		
Tax payable							
Profit/(Loss) after tax		(3,518)	(4,083)	(2,627)	(2,356)		
Other Comprehensive Profit/(Loss)							
Forex		90	254				
Total Comprehensive Profit/(Loss)		(3,428)	(3,829)	(2,627)	(2,356)		
BALANCE SHEET		A\$000s	FY24	FY25	FY26E	FY27E	
Cash		8,587	5,268	576	2,282		
Exploration & Evaluation		4,625	4,872	5,955	7,455		
Other		433	251	370	471		
Total Assets		13,645	10,391	6,901	10,208		
Payables		110	238	350	350		
Provisions							
Debt							
Convertibles							
Total Liabilities		110	238	350	351		
Total Net Assets/Equity		13,535	10,153	6,551	9,857		
Net Cash/(Debt)		8,587	5,268	576	2,282		
Share Capital		17,677	17,661	17,661	17,661		
Reserves		1,397	2,114	1,139	6,801		
Retained Earnings		(5,539)	(9,622)	(12,249)	(14,605)		
Shareholders Funds		13,535	10,153	6,551	9,857		
EQUITY VALUATION		Risked Range			Low	Mid	High
A\$m		Low	Mid	High	A\$/share		
PRA		32	99	131	\$0.24	\$0.74	\$0.98
Contingent Resources		143	183	219	\$1.07	\$1.37	\$1.64
Other Assets		20	25	30	\$0.15	\$0.19	\$0.22
		195	307	379	\$1.46	\$2.29	\$2.84
Net cash/(debt)		4					
Corporate costs		(5)					
TOTAL		193	305	378	\$1.44	\$2.28	\$2.83
Shares on issue (M)		134					
Shares on issue (M)		144			diluted	\$1.37	\$2.15
					\$2.65		
CASHFLOW		A\$000s	FY24	FY25	FY26E	FY27E	
Operational Cash Flow			(2,395)	(3,222)	(4,486)	(3,190)	
Net Interest			41	86	105	5	
Taxes Paid						0	
Other							
Net Operating Cashflow			(2,436)	(3,308)	(4,592)	(3,195)	
Payments for Acquisitions			(79)				
Proceeds from sales							
Dividends received							
Other				(9)	(100)	(99)	
Net Investing Cashflow			(79)	(17)	(100)	(99)	
Share Issues			9,167				
Convertible bonds							
Option exercise							
Net debt movement							
Other						5,000	
Net Financing Cashflow			9,167	0	0	5,000	
Net Change in Cash			6,653	(3,321)	(4,692)	1,706	
Cash			8,587	5,268	576	2,282	

Source: Company data, RaaS estimates

FINANCIAL SERVICES GUIDE

RaaS Research Group Pty Ltd

ABN 99 614 783 363

Corporate Authorised Representative, number 1248415, of

BR SECURITIES AUSTRALIA PTY LTD; ABN 92 168 734 530; AFSL 456663

Effective Date: 26th March 2024

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Contact Details, BR and RaaS

BR Head Office: Level 1, 160 Edward Street, Brisbane, QLD, 4000 www.brsecuritiesaustralia.com.au

RaaS: c/- Rhodes Docherty & Co Pty Ltd, Suite 1, Level 1, 828 Pacific Highway, Gordon, NSW, 2072.

P: +61 414 354712

E: finola.burke@raasgroup.com

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