

ASX ANNOUNCEMENT 1 June 2022

# TRANSFORMATIONAL GEOTHERMAL ACQUISITION PROPELS GREENVALE TO FOREFRONT OF RENEWABLE ENERGY SECTOR

Acquisition of dynamic and fast-growing company targeting exploitable geothermal resources in SE Queensland supports Greenvale's development strategy for the Alpha Torbanite Project

# **Highlights:**

- Greenvale to acquire an initial 51% stake in privately held geothermal energy company Within Energy Pty Ltd ("Within Energy"), to increase to 100% in line with agreed milestones.
- Within Energy includes a multi-disciplinary team of specialists in the energy and oil & gas sectors who will join the Greenvale Executive Team, including their highly regarded CEO, Adam Stepanoff.
- Within Energy has invested significantly in targeting exploitable geothermal sources in Queensland, with three tenures under application across the State's south-east near Brisbane, Maryborough and Gladstone.
- Within Energy is focused on the use of Binary Cycle technology, which enables energy production from lower temperature geothermal reservoirs.
- Geothermal energy projects are potentially eligible for both carbon credits and renewable energy certificates, providing a clear pathway for Greenvale to permit and develop its flagship Alpha Torbanite Project in Queensland.
- Reflecting its expanded focus on renewable energy production in conjunction with its Alpha development strategy, Greenvale Mining Limited will, subject to shareholder approval, change its name to "Greenvale Energy Limited".
- Consistent with this focus, Greenvale has also agreed in principle to accept an
  offer from diversified international explorer, Astro Resources NL (ASX: ARO)
  ("Astro"), to acquire an 80% stake in Greenvale's Georgina Basin IOCG Project.
- The structure of the Astro transaction ensures that Greenvale shareholders will retain exposure to any future upside potential at Georgina Basin through a 20% direct project stake, a 19.7% stake in ARO and a production royalty, while reducing the ongoing exploration costs associated with the Project.



Greenvale Mining Ltd (ASX: GRV) (Greenvale or the Company) is pleased to announce that it has secured an exceptional growth opportunity in the renewable energy sector through the proposed acquisition of a privately held Queensland-based geothermal energy company. Greenvale has entered into a conditional agreement to acquire an initial 51% controlling interest in Within Energy Pty Ltd, a geothermal energy company based in Toowoomba, Queensland, increasing to 100% ownership subject to satisfaction of agreed milestones.

The transformational acquisition will provide Greenvale with a clear pathway to fast-track the permitting and development of the Alpha Project in Central Queensland, as well as propelling the Company to the forefront of the green energy movement currently gaining significant momentum around the world.

Established in 2021, Within Energy is an exciting emerging participant in the Australian green energy market, focused on establishing geothermal energy production in Queensland and across Australia. Within Energy brings together a multi-disciplined team of professionals from across the energy sector with a wealth of technical and market knowledge.

Within Energy has invested significantly in uncovering exploitable geothermal sources in Queensland, with three exploration permits currently under application across the State's south-east near Brisbane/ Toowoomba, Maryborough and Gladstone for a total land area (under application) of approximately 11,000km² (see Figure 1).

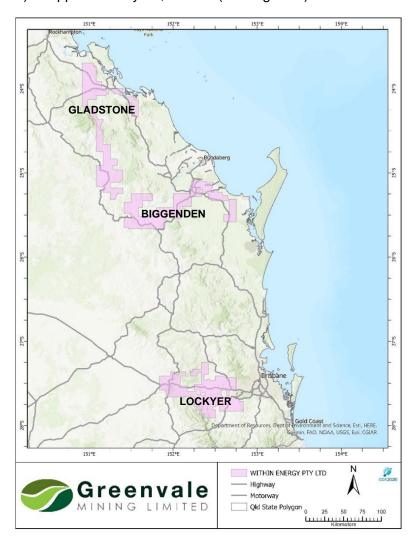


Figure 1: Within Energy Pty Ltd Geothermal Exploration Permit Areas (Under Application)



Historically, geothermal projects in Australia have focused on high temperature reservoirs (above 180°C) which exist only at depths greater than 3,000m and are typically found only in remote locations.

Within Energy is focusing on advancements in Binary Cycle systems that use lower temperature reservoir water (optimally between 100 and 120°C) and a heat exchanger process to operate a turbine in a closed loop.

The ability to generate geothermal power at lower temperatures can significantly reduce initial capital costs associated with exploiting source systems. The technology has been successfully applied around the world, with over 150 binary cycle geothermal plants in production globally. In the US, binary cycle systems are currently contributing over 4,100 megawatt-hours (MWh) of energy, with capacity growing by up to 4% per year.

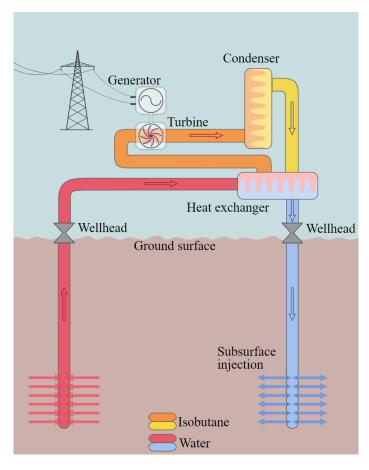


Figure 2: Binary Cycle System (Image Credit: Rehman Abubakr)

All three of Within Energy's application areas, Gladstone, Lockyer and Biggenden, are located close to major commercial and industrial centres, with minimal transmission distance to the established power grid and ample access to accommodation and a potential workforce.



# A Fast-Track Development Pathway for potential Carbon-Offset Bitumen

Greenvale sees strong potential for geothermal power to fast-track the development strategy for its flagship Alpha Torbanite Project in Central Queensland.

As previously advised, Greenvale subsidiary, Alpha Resources Pty Ltd, has made applications to the Queensland Department of Resources for four geothermal licences (and corresponding mineral rights) as part of an enhanced renewable energy strategy for the Alpha Project (see ASX Announcement 10 March 2022).

The Company believes that an exploitable and economic geothermal power source will provide sufficient carbon credits to offset future production at Alpha – effectively making it a carbon offset source of torbanite supply – with the acquisition of a controlling stake in Within Energy representing a significant step towards achieving this goal.

Additionally, Greenvale sees compelling potential to generate additional income streams from power generation and from the sale of surplus Renewable Energy Certificates (RECs) and Australian Carbon Credit Units (ACCUs).

Renewable Energy Certificates (RECs) are a Federal Government instrument that certifies that the bearer owns one megawatt-hour (MWh) of electricity generated from a renewable energy source. Once the power provider has fed the energy into the grid, one REC is received for every MWh of renewable energy produced. RECs can then be sold on the open market as an energy commodity.

Australian Carbon Credit Units (ACCUs) are issued by the Federal Government's Clean Energy Regulator. One ACCU is allocated for each tonne of carbon dioxide equivalent stored or avoided by a project. These can be traded or sold both nationally and internationally.

## **Transaction Consideration**

Subject to receipt of shareholder approval, Greenvale will issue 3,000,000 fully-paid ordinary GRV shares in consideration for acquiring an initial 51% of Within Energy shares, with the remainder of the Within Energy shares to be delivered in three tranches upon achievement of milestones, being the successful grant of each of the individual specified EPG Project areas, Lockyer, Gladstone and Biggenden. If all areas proceed to grant, the total consideration for the transaction will be 50,000,000 fully paid ordinary GRV shares.

The parties agree that if any or all milestones are not satisfied within 18 months of the acquisition of the initial 51% interest, all remaining Within Energy shares will be transferred to GRV, and GRV will issue 100,000 shares in consideration for the transfer of these shares.

In addition, it is proposed that Greenvale Performance Rights be offered two of the Within Energy key staff.

The key transaction terms are set out in Appendix A of this release.



# Appointment of Mr Adam Stepanoff as COO-Renewables

On completion, the CEO of Within Energy, Mr Adam Stepanoff BSc., MBA, will be appointed to the position of COO–Renewables at Greenvale, with responsibility for developing GRV's geothermal assets. Mr Stepanoff has over 20 years' experience across the energy sector including asset management, operations, construction, and development with particular emphasis on project and business development in Queensland.

## Proposed change of Company name

As part of the transaction, and subject to shareholder approval, Greenvale Mining Ltd proposes to change the company name to Greenvale Energy Ltd. With the shift in focus towards geothermal energy and the advancement of the Alpha Torbanite Project, the Directors believe the new name more accurately reflects the Company's strategic direction.

# Sale of 80% stake in the Georgina Basin IOCG Project

The Greenvale Board believes that, given the Company's new strategic direction, the Georgina Basin IOCG Project no longer fits within GRV's asset profile. Greenvale is firmly focused on becoming a sustainable producer of bitumen to feed the critical infrastructure needs of Australia, as well as becoming a significant participant in the renewable energy sector.

The Company has therefore agreed in principle to an offer from diversified international exploration company Astro Resources NL ('Astro'; ASX: ARO) to take an 80% stake in the Georgina Basin Project.

Astro's recent focus has been on developing gold exploration interests in Nevada, USA, which is globally recognised as a "gold hotspot", having produced over 215Moz since 1835.

Astro holds the Needles Gold Project, which is located approximately 100km south-east of the 15Moz Kinross Round Mountain open cut gold mine, considered to be one of the world's largest epithermal, low-sulphidation volcanic-hosted gold deposits. The Needles Project was historically mined for epithermal gold and silver mineralisation in the early 1900s and subsequent geophysical exploration has identified the potential to host an orebody of similar size and structure to the Round Mountain Deposit. ARO has recently completed a four-hole drill campaign for the Needles project and is currently waiting for the final results on the fourth hole<sup>1</sup>.

Astro has also staked a series of highly prospective lithium brine and clay claims in the Kibby Basin, Nevada, providing a low-cost entry to a high-value commodity in a Tier-1 resource jurisdiction.

The other key area of focus for Astro is the Governor Broome Heavy Mineral Sands Project in the south-west of Western Australia. Astro has recently completed an in-fill drilling campaign at this project with a view to upgrading the resource category from JORC Inferred to JORC Indicated for the Jack Track tenement. Upon completion of the resource upgrade, Astro is considering undertaking a Scoping Study of the entire project<sup>2</sup>.

Astro also holds the Lower Smoke Creek Diamond Project located south-west of Lake Argyle in the Kimberly region of Western Australia. Astro has announced its intention to "spin-off" this asset with a collection of other diamond projects.

As a condition of the transaction, Greenvale Directors Mr. Neil Biddle and Mr. Tony Leibowitz will join the board and one existing Astro director will stand down at the time of settlement. In



addition, Greenvale's CEO, Mr. Matthew Healy, will commence as Astro's Chief Executive Officer and other operational staff involved in the Georgina Basin project will transfer to Astro.

Greenvale will receive 1,150,000,000 (1.15 billion) fully paid ordinary Astro shares for the 80% stake in Knox Resources Pty Ltd, the owner of the Georgina Basin IOCG Project. Of the Astro shares received, 80% will be subject to escrow restrictions as set out in Appendix B to this release. This offer represents approximately 19.7% of Astro's existing issued capital Greenvale will also retain a 2% net smelter royalty for all future IOCG production from the existing Knox tenements.

Greenvale will retain a 20% shareholding in Knox and will be required to contribute to the funding of Knox on a pro rata basis.

Greenvale will grant Astro the right to acquire the remaining 20% interest for shares or cash (at the election of Astro) for a period of two years following the completion of the initial acquisition. The value of the acquisition is to be based on an independent valuation to be commissioned by Astro and Greenvale.

The structure of this transaction ensures that Greenvale shareholders retain exposure to any future upside potential at Georgina Basin whilst allowing Greenvale to focus its efforts on the development of the Alpha Torbanite Project and the pursuit of a commercially exploitable sources of geothermal energy.

The key transaction terms are set out in Appendix B of this release

## **Management Comment:**

Commenting on the transaction, Greenvale Mining's Managing Director, Neil Biddle, said:

"This transaction represents an outstanding outcome for Greenvale shareholders, potentially providing valuable carbon offsets to support the development of our flagship Alpha Torbanite Project, while also providing the potential for strong long-term cash flows for the Company through the sale of carbon credits.

"Within Energy has an attractive business model based on the exploitation of shallow geothermal reservoirs that lie close to major population centres in south-east Queensland – an area that is emerging as a future 'green' industrial hub.

"In addition to powering the Alpha Project, we see outstanding potential for these geothermal assets to attract new carbon neutral businesses to the region.

"Green energy and the move towards decarbonisation represent an unprecedented growth opportunity in the modern era, and this acquisition puts Greenvale at the forefront of this global transition.

"In keeping with this renewable energy focus, Greenvale proposes to revert the Company name to 'Greenvale Energy' and will also seek to divest a significant portion of the Georgina Basin IOCG Project. This will enable Greenvale to focus its resources on the development of the Alpha Project and the newly acquired geothermal energy assets, while still enabling shareholders to benefit from future exploration upside at Georgina Basin."



## **Approval Process**

The two transactions are not interdependent and, in the event that one transaction does not proceed, this will not preclude completion of the other.

Upon completion of definitive agreements between all parties, both Greenvale and Astro will proceed to call General Meetings of members to seek the necessary approvals.

## References

Information contained in this announcement that relates to past exploration results is extracted from, or was set out in, the following ASX announcements:-

- 1. ASX:ARO "Drilling Update at Needles Gold Project" 26 May 2022.
- 2. ASX:ARO "First Phase Drilling Completed at Jack Track Tenement" 25 May 2022

## **Authorised for Release**

This announcement has been approved by the Board for release.

With the issue of this release, it is requested that trading in the Company's securities be resumed.

# Alan Boys Company Secretary

## Contact

For further details, contact: Neil Biddle, Managing Director, 0418 915 752 Matthew Healy, CEO, 0431 683 952

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# **Appendix A – Transaction Terms – Within Energy Pty Ltd ("WE")**

The material terms of the proposed acquisition by Greenvale Mining Limited ("the Company") of all of the shares in WE held by sole shareholder Mimo Strategies Pty Ltd ("the Vendor") are as follows:

## A. Conditions Precedent

The conditions precedent, which must be satisfied or subject to a waiver prior to the Company completing the proposed acquisition include:

- Execution of a binding definitive agreement;
- Confirmation of the good standing of the applications for the Exploration Permits-Geothermal with the Department of Resources (Qld);
- The parties obtaining all shareholder, statutory and regulatory approvals and or waivers required to undertake the proposed acquisition;
- The parties obtaining, in a form reasonably satisfactory to the Company, all third-party consents or waivers which are necessary or desirable to complete the proposed acquisition; and,
- At settlement of the sale and purchase of the first 51% of the WE shares ("Settlement"), any liabilities existing between WE and any related bodies corporate of WE are extinguished or capitalisation through conversion of equity of WE.

## B. Consideration

The consideration paid by the Company will be fully paid ordinary shares in the capital of the Company (Shares), subject to receipt of shareholder approval as follows:

- i. The Company to issue 3,000,000 Shares (Initial Shares) in consideration for acquiring 51% of WE
- ii. The following put and call options will be granted to the vendor and to the Company with respect to the following events (each, a "Milestone"):
  - (a) 19,000,000 Shares to be issued to the Vendor by the Company upon the grant to WE of the initial interest of Application for EPG- Lockyer Project within 18 months following settlement of the issue of the Initial Shares (Milestone End Date), in consideration for acquiring 19.8% of the WE shares;
  - (b) 19,000,000 Shares to be issued to the Vendor by the Company to WE of the initial interest of Application for EPG- Gladstone Project by the Milestone End Date, in consideration of acquiring 19.8% of WE shares; and,
  - (c) 9,000,000 Shares to be issued to the Vendor by the Company upon the grant to WE of the initial interest in the Application for EPG- Biggenden Project by the Milestone End Date, in consideration for acquiring 9.4% of the WE shares.
- iii If any or all of the Milestones are not satisfied by the Milestone End date, the Vendor will transfer all remaining WE shares to the Company and the Company will issue the Vendor100,000 Shares in consideration for the transfer of the remaining WE shares.



# D. Working Capital Funding

From the date the proposed acquisition is announced by the Company to ASX until Settlement, all expenses incurred by WE shall be funded by the Company by way of a loan or otherwise and on such terms and conditions as are acceptable to the Company. The Company will continue to fund all working requirements of WE post the acquisition.

# E. Key Personnel terms of Engagement and Performance Rights

The company will from the date of Settlement enter into employment contacts with two key staff and offer Performance Rights in accordance with the following terms:

#### **ADAM STEPANOFF**

KEY TERMS	DESCRIPTION				
Salary	GRV will pay to Mr Stepanoff for services rendered a salary of \$250,000 pe annum plus statutory superannuation.				
Offer of Performance Rights	of GRV approvir agree to issue	er, GRV will, subject to receipt of approving re-adoption of GRV's Performance Rie to Mr Stepanoff 15,000,000 Performance will have the following vesting condi-	ghts and Options Plar ormance Rights. The		
	Number of Performance Rights	Vesting criteria	Last date to achieve vesting criteria		
	833,333	(a) continuous service under Mr Stepanoff's executive service agreement for a period of 12 months; and (b) achievement of a volume weighted average price (VWAP) of the shares of GRV of \$0.60 or more over 20	Three years from the date of grant of the Performance Rights.		
	833,333	consecutive trading days.  (a) continuous service under Mr Stepanoff's executive service agreement for a period of 12 months; and  (b) achievement of a VWAP of the shares of GRV of \$0.80 or more over 20	Three years from the date of grant of the Performance Rights.		
	833,333	consecutive trading days.  (a) continuous service under Mr Stepanoff's executive service agreement for a period of 24 months; and  (b) achievement of a VWAP of the shares of GRV of \$0.60 or more over 20 consecutive trading days.	Three years from the date of grant of the Performance Rights.		
	833,333	(a) continuous service under Mr Stepanoff's executive service agreement for a period of 24 months; and (b) achievement of a VWAP of the shares of GRV of \$0.80 or more over 20 consecutive trading days.	Three years from the date of grant of the Performance Rights.		
	833,334	(a) continuous service under Mr Stepanoff's executive service agreement for a period of 35 months; and (b) achievement of a VWAP of the shares of GRV of \$0.60 or more over 20 consecutive trading days.	Three years from the date of grant of the Performance Rights.		



833,334	(a)	continuous service under Mr	Three years from the
000,004	(a)	Stepanoff's executive service agreement for a period of 35 months; and	date of grant of the Performance Rights.
	(b)	achievement of a VWAP of the shares of GRV of \$0.80 or more over 20 consecutive trading days.	
2,500,000 <sup>1</sup>	(a) (b)	continuous service under Mr Stepanoff's executive service contract for a period of 12 months; and GRV and/or its controlled entities (the GRV Group) securing the first renewable energy certificate/Australian carbon credit unit/REC equivalent for any existing or future tenements held by the GRV Group (including an existing or future tenements held by WE following Settlement).	Five years from the date of grant of the Performance Rights.
2,500,000 <sup>1</sup>	(a) (b)	continuous service under Mr Stepanoff's executive service contract for a period of 12 months; and the GRV Group securing the first renewable energy certificate/Australian carbon credit unit/REC equivalent for any of the Projects.	Five years from the date of grant of the Performance Rights.
2,500,0001	(a)	continuous service under Mr Stepanoff's executive service contract for a period of 24 months; and the GRV Group securing the first renewable energy certificate/Australian carbon credit unit/REC equivalent for any existing or future tenements held by the GRV Group (including an existing or future tenements held by WE following Settlement).	Five years from the date of grant of the Performance Rights.
with GRV is termin	ated by	continuous service under Mr Stepanoff's executive service contract for a period of 24 months; and the GRV Group securing the first renewable energy certificate/Australian carbon credit unit/REC equivalent for any of the Projects.  of these Performance Rights, the holder's ey GRV for any reason, other than due to seri	ous or willful misconduct
or otherwise for ca Performance Right		ithout notice, the holder will continue to har remain unvested.	ve legal ownership of all



## **CHRISTINE LE BILLON**

KEY TERMS	DESCRIPTION						
Salary	GRV will pay to Ms Le Billon for services rendered a salary of \$165,000 per annum plus statutory superannuation and entitlements.						
Offer of Performance Rights	of GRV approvi	val by the shareholders ights and Options Plan, ghts. The Performance					
	Number of Performance Rights	Vesting criteria	Last date to achieve vesting criteria				
	133,333	<ul> <li>(a) continuous service under Ms Le Billon's employment agreement for a period of 12 months; and</li> <li>(b) achievement of a volume weighted average price (VWAP) of the shares of GRV of \$0.60 or more over 20 consecutive trading days.</li> </ul>	Three years from the date of grant of the Performance Rights.				
	133,333	<ul> <li>(a) continuous service under Ms Le Billon's employment agreement for a period of 12 months; and</li> <li>(b) achievement of a VWAP of the shares of GRV of \$0.80 or more over 20 consecutive trading days.</li> </ul>	Three years from the date of grant of the Performance Rights.				
	133,333	(a) continuous service under Mr continuous service under Ms Le Billon's employment agreement for a period of 24 months; and (b) achievement of a VWAP of the shares of	Three years from the date of grant of the Performance Rights.				
	133,333	GRV of \$0.60 or more over 20 consecutive trading days.  (a) continuous service under Ms Le Billon's employment agreement for a period of 24 months; and  (b) achievement of a VWAP of the shares of	Three years from the date of grant of the Performance Rights.				
	133,334	GRV of \$0.80 or more over 20 consecutive trading days.  (a) continuous service under Ms Le Billon's employment agreement for a period of 35 months; and  (b) achievement of a VWAP of the shares of	Three years from the date of grant of the Performance Rights.				
	133,334	GRV of \$0.60 or more over 20 consecutive trading days.  (a) continuous service under Ms Le Billon's employment agreement for a period of 35 months; and	Three years from the date of grant of the Performance Rights.				
		(b) achievement of a VWAP of the shares of GRV of \$0.80 or more over 20 consecutive trading days.					



# Appendix B – Transaction Terms – Knox Resources Pty Ltd (Knox)

The material terms of the proposed disposal by Greenvale Mining Limited (the Company) of 80% of its shares in Knox to Astro Resources NL ("ARO") are as follows:

## A. Conditions Precedent

The conditions precedent, which must be satisfied or subject to a waiver prior to the Company completing the proposed disposal include:

- The finalisation of ARO's due diligence on Knox;
- The Company and ARO entering into a mutually acceptable sale and purchase agreement for the acquisition of Knox;
- ARO obtaining shareholder approval for the proposed acquisition;
- All key staff and management to be transferred with Knox on terms no less favourable than currently enjoyed and is subject to ARO being satisfied with the terms of the management contracts. ARO will assume the employee entitlements of those employees;
- At the date of settlement all intercompany loans owed by Knox to related bodies corporate are extinguished or capitalised;
- The Company entering into a suitable financing agreement for the future funding of Knox following settlement.

## B. Consideration

In consideration of the Company selling 80% of the shares on issue in Knox, at settlement of the proposed disposal, ARO will:

- i. Issue the Company with the equivalent of 1,150,000,000 ordinary shares in the capital of ARO ("ARO Shares"), which represents approximately 19.7% of the current issued capital of ARO;
- ii. Grant the Company a 2% net smelter royalty ("NSR") for all IOCG product exploited from the existing tenements owned by Knox at the time of settlement.
- iii. The ARO Shares issued to the Company will be subject to the following voluntary escrow provisions:
  - (a) 20% of the ARO Shares no escrow;
  - (b) 30% of the ARO Shares will be escrowed for one year from the date of issue;
  - (c) 50% of the ARO Shares will be escrowed for 2 years from the date of issue.



# C. Option to Acquire Balance of Securities and NSR

The Company will also grant ARO a 2-year option, from the date of acquisition of the 80% shareholding in Knox to acquire the balance of the Knox shares via cash or the issue of ARO Shares, for a price to be determined by independent valuation commissioned by the Company and ARO. If ARO seeks to exercise its option to acquire the balance of the Knox shares, shareholder approval for the acquisition must be obtained.

The Company will grant an option to ARO to acquire the NSR within a period of 5 years from the date of grant at an independent valuation for either cash or shares (at ARO's election).

If ARO seeks to exercise its option to acquire the balance of the Knox shares or the NSR, shareholder approval for the acquisition must be obtained.

Where the consideration for the balance of Knox shares or the NSR is by way of ARO Shares, for calculating the number of ARO Shares to be issued, the value of an ARO share is to be determined using a value weighted average price ("VWAP"), which takes into account an appropriate period of time (5 to 15 trading days), having regard to the performance of ARO shares and that the selected VWAP is not to be subject to further discount.

# D. Board Changes

The proposed board structure of ARO post completion is proposed to be:

- Two existing ARO directors continue with one director retiring; and,
- Two Greenvale directors, Mr Tony Leibowitz, Mr Neil Biddle be appointed at completion. The Company acknowledges that should ARO acquire the remaining 20% shareholding in Knox and or the NSR, the Company will not seek to increase its board representation as part of those transactions.