

ASX ANNOUNCEMENT

30 May 2023

STRONG METALLURGICAL TESTWORK RESULTS FOR GROWING HIGH-GRADE NEVER NEVER GOLD DEPOSIT

+92% overall metallurgical recoveries with a high gravity component & leach kinetics aligned with the “fit-for-purpose” Dalgaranga CIL process plant

Key Points:

- Metallurgical recovery testwork conducted on samples from across the Never Never Gold Deposit show that Never Never high-grade material – being mineralised material that could reasonably be expected to be mined– shows:
 - Average 92% overall metallurgical recovery in oxide material, with fresh material averaging above 94% through a standard gravity/Carbon-in-Leach (“CIL”) process flowsheet.
 - Overall gravity recoveries or Gravity Recoverable Gold (“GRG”) averages 20% in the oxide material and 34% in fresh material through a standard gravity concentration flowsheet.
 - Overall leach kinetics illustrates that more than 90% of the gold contained in high-grade material in CIL feed leaches within 48hrs.
- In addition, testwork on the Never Never high-grade material also shows that there are:
 - No material or significant recovery issues from any typical “deleterious elements”, such as copper, lead, zinc, nickel or arsenic in the high-grade material.
 - No material, or significant recovery issues from any “preg-robbing” material, such as carbonaceous material in graphitic shale.
- Analysis of the 5-year-old 2.5Mtpa Dalgaranga Processing Plant (“DPP”) shows:
 - The existing CIL process plant flowsheet is well suited in its current configuration to process the Never Never high-grade material.
 - The comminution circuit is suitable for processing the Never Never high-grade material with upgrades as indicated in the original Dalgaranga Gold Project DFS.
 - Gravity, leaching, gold recovery, tailings and plant services are fit for purpose and only require minor refurbishment prior to start up.
 - The existing CIL circuit capacity is adequate at the anticipated treatment rates for the Never Never high-grade material.

- **Next Steps:**

- Refresh of the process design to support varying throughput rate options and recovery of the Never Never high-grade material.
- Optimisation studies on the processing flowsheet targeting further improvements in overall metallurgical recoveries.
- Identification of additional test work to reduce operational risk.
- Mining studies and associated blending strategies – aiming to achieve the best outcome using various feed sources.



Figure 1: Three drill rigs (two diamond rigs – #1 & #2 and 1 RC rig – #3) drilling out the high-grade Never Never Gold Deposit with the 2.5Mtpa Dalgarranga Process Plant in the background.

Gascoyne Resources Limited (“**Gascoyne**” or “**Company**”) (ASX: GCY) is pleased to report metallurgical testwork results for the high-grade Never Never Gold Deposit at its 100%-owned Dalgarranga Gold Project in Western Australia.

These results further reinforce the significant potential of the rapidly growing Never Never Gold Deposit at Dalgarranga, which comprises a current Mineral Resource Estimate (MRE) of **303koz @ 4.64g/t Au** with significant growth potential that is being targeted by ongoing drilling.

Gascoyne Managing Director and Chief Executive Officer, Simon Lawson, said: “*The Never Never mineralisation is very simple: silica-rich, fine iron sulphide as pyrite and accessory gold. The outstanding metallurgical testwork results announced today clearly demonstrate the very simple processing flowsheet required to achieve very high recoveries from the extensive high-grade Never Never mineralisation.*

“*This ticks another important box in our comeback story, demonstrating that we have an excellent development proposition on our hands at Never Never with excellent metallurgical recoveries and processing characteristics.*

“From the initial discovery last year, we have been meticulously checking and double-checking our drilling methods, sampling methods and QAQC methods – analysing each drill-hole with hand-held XRF on the drill pads, regularly duplicating our Photon assays with Fire Assay, and seeking external third-party review of our Mineral Resource Estimates.

“We want to ensure that Never Never is as bullet-proof as possible, underpinned by transparent processes and strong technical work that has been independently verified and checked.

“Never Never is a very special gold deposit that is located right in front of our processing plant. This testwork shows that Never Never material is well suited to that processing plant and that the chemistry is very simple. There are no significant deleterious elements in the ore. There are no material preg-robbing characteristics – a finding that can’t be understated as we have a shale footwall, a rock-type that can sometimes be problematic.

“This metallurgical testwork clearly demonstrates that the footwall shale at Never Never is not an issue – a great result!”

Never Never is a new high-grade gold deposit which strikes and plunges to the west-south-west. The deposit was discovered while following up wide, high-grade drill intercepts from the earlier Gilbey’s North extension discovery immediately north of the Gilbey’s open pit at Dalgaranga. Due to the high-grade and apparent scale of Never Never, this deposit now represents the foundation of the Company’s new operating and growth plan.

Never Never is distinct from the Gilbey’s North discovery due to considerable differences in tenor, thickness of mineralisation, mineralogy, scale, orientation and host structure/rock-type. Despite these differences, due to the close spatial association of the two deposits, the Never Never and Gilbey’s North deposits are collectively known as the “Never Never Gold Deposit”.

Never Never is much higher grade than any of the previously defined ore bodies at Dalgaranga and appear to be far more structural, fold and/or shear-hosted as opposed to the more stratigraphic/shale associated historically defined Gilbey’s series of gold deposits.

On 23 January 2023 Gascoyne released an updated Never Never Gold Deposit Mineral Resource Estimate of **303,100 ounces @ 4.64g/t gold** (comprising **1.0Mt @ 2.45g/t for 86,500oz Au “Open Pit”** (>0.5g/t Au) and **0.93Mt @ 7.22g/t for 216,600oz Au “Underground”** (>2.0g/t Au)).

The following table details the test data and results on each sample:

Comp ID	Ore Type	Reconciled Results					
		Calc. Head Grade (g/t)	Gravity Recovery	48-hr CIL Recovery	Overall Recovery	48-hr Tail (g/t)	48-hr CIL Stage Recovery (%)
NN Stg 2 Comp 1 (GP1B)	Fresh	6.45	22.8	74.1	96.9	0.21	95.9
NN Stg 2 Comp 2 (GP13B)	Fresh	3.78	21.1	76.0	97.1	0.09	96.3
NN Stg 2 Comp 3 (GP19A)	Fresh	2.95	29.7	59.4	89.1	0.36	84.5
NN Stg 2 Comp 4 (GP21A)	Fresh	31.63	30.6	66.6	97.2	0.87	96.0
NN Stg 2 Comp 5 (GP3B)	Fresh	2.27	27.2	65.1	92.2	0.18	89.3
NN Stg 2 Comp 6 (GP5B)	Fresh	2.34	48.9	46.0	94.9	0.12	90.1
NN Stg 2 Comp 7 (GP20A)	Fresh	1.89	18.5	74.1	92.7	0.12	91.0
NN Stg 2 Comp 8 (GP23A)	Fresh	2.74	60.1	38.4	98.5	0.04	96.3
NN Stg 3 Master Comp	Fresh	10.23	46.1	47.7	93.8	0.63	88.6
"Fresh" Average		7.14	33.9	60.8	94.7	0.29	92.0
NN Stg 2 Comp 10 (GN2B)	Oxide	3.01	34.0	57.9	91.8	0.27	87.6
NN Stg 2 Comp 12 (GN5B)	Oxide	0.95	12.3	82.1	94.4	0.06	93.7
NN Stg 2 Comp 13 (GN6B)	Oxide	1.87	16.0	68.2	84.3	0.31	81.3
NN Stg 2 Comp 15 (GN8B)	Oxide	0.55	18.2	78.6	96.7	0.02	96.0
"Oxide" Average		1.59	20.1	71.7	91.8	0.16	89.8

Table 2: Metallurgical Recovery Testwork Data for Never Never Material

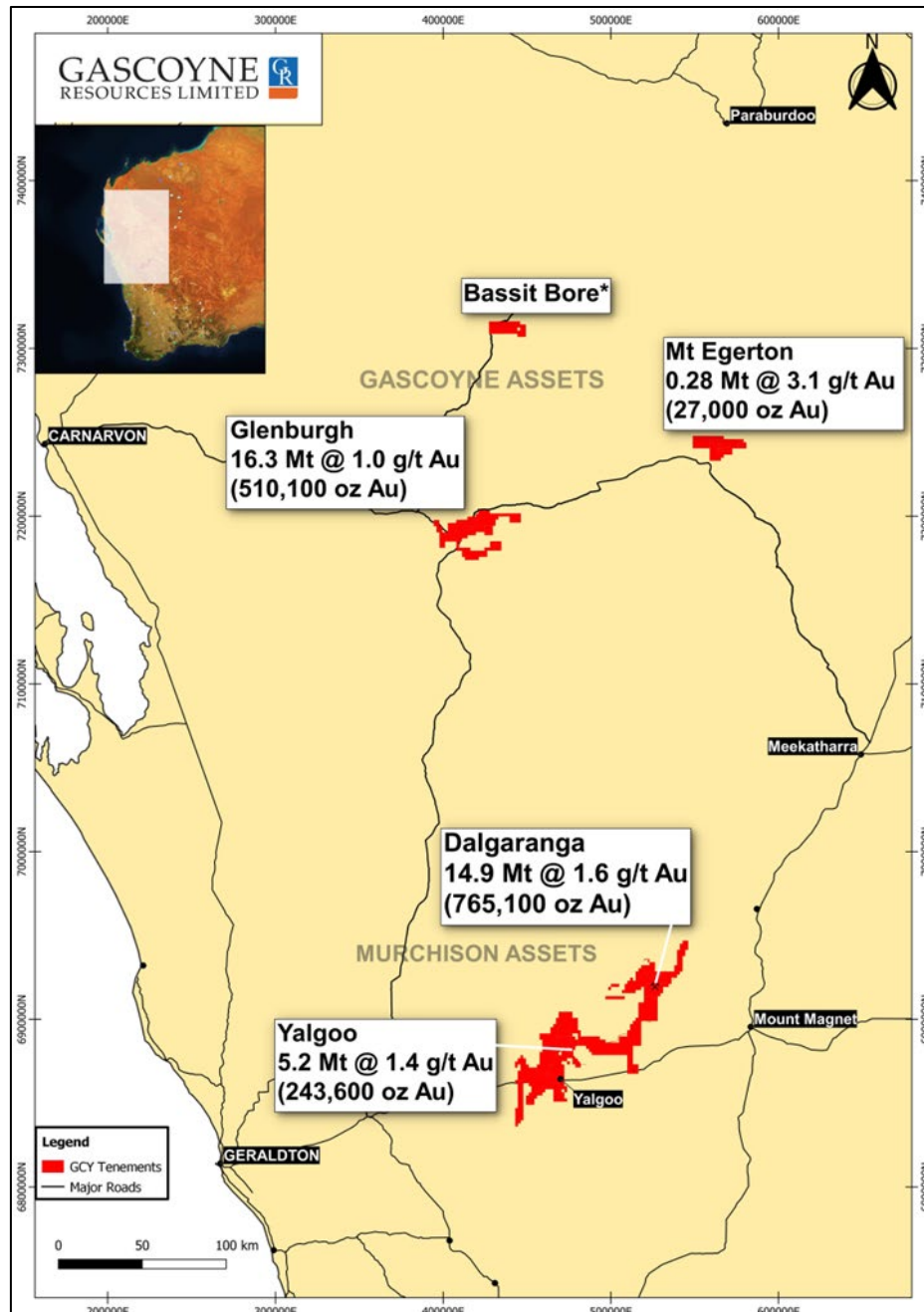


Figure 2: Location of Gascoyne Resources Limited Projects

Authorisation

This announcement has been authorised for release by the Board of Gascoyne Resources Limited.

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BACKGROUND ON GASCOYNE RESOURCES

Gascoyne Resources Limited (ASX: GCY) is an ASX-listed gold company which is currently undergoing a transformational restructure and repositioning as an advanced exploration company with a rapid pathway back into production at its Dalgaranga Gold Project, located 65km north-west of Mt Magnet in the Murchison District of Western Australia.

Dalgaranga produced over 70,000oz of gold in FY2022 before being placed on care and maintenance in November 2022 to implement an operational reset designed to preserve the value of its extensive infrastructure and Resource base while developing a new, sustainable operating plan.

This approach is underpinned by the exceptional high-grade Never Never gold discovery, which was made in 2022 just 1km from the existing 2.5Mtpa carbon-in-leach processing facility and the main open pit at Dalgaranga.

Gascoyne has moved to rapidly unlock the potential of this significant discovery, which comprises a current JORC Mineral Resource of 303,100oz at an average grade of 4.64g/t, plus a substantial Exploration Target ([read the announcement here](#)).

The Company has secured a landmark \$50 million funding package to underpin an 18-month exploration and strategic plan (**the “365” strategy**) targeting:

- A +300koz Reserve at a grade exceeding 4.0g/t Au at Never Never;
- A +600koz Resource at a grade exceeding 5.0g/t Au at Never Never;
- The development of a 5-year mine plan aimed at delivering gold production of 130-150koz per annum.

This updated strategy is centred around an aggressive exploration program at Never Never designed to target Resource expansion, Reserve definition and near-mine exploration drilling targeting Never Never “lookalikes”.

Gascoyne also intends to undertake the development of an underground exploration drill drive. Underground drill platforms will be utilised for Never Never underground Reserve drilling, as well as to test depth extensions of the current 303koz Resource.

In addition to its near-mine exploration at Dalgaranga, Gascoyne is actively exploring more than 500km² of surrounding exploration tenements and also owns the advanced 244koz Yalgoo Gold Project, where permitting activities are well advanced to establish a potential satellite mining operation at the Melville deposit.

In addition to Dalgaranga and Yalgoo, the Company’s 527koz advanced exploration and development project at Glenburgh–Mt Egerton, located ~300km north of Dalgaranga, has the potential to be a second production hub.

The Company’s Values, “**Putting HEARTS into Mining**” through Honesty, Excellence, Accountability, Resilience, Teamwork and Safety are core to who we are and how we work together and with the community.

GROUP MINERAL RESOURCES:

Total Group Mineral Resources

Category	Tonnes (Mt)	Grade (g/t)	Contained Metal (koz Au)
Measured	0.50	1.0	15.2
Indicated	27.82	1.2	1,117.5
Inferred	8.39	1.5	413.1
GRAND TOTAL	36.71	1.3	1,545.8

Table A1: Group Mineral Resource Estimates for Gascoyne Resources Limited (at various cut-offs)

Murchison Region Mineral Resources (DGP & YGP)

Category	Tonnes (Mt)	Grade (g/t)	Contained Metal (koz Au)
Measured	0.50	1.0	15.2
Indicated	14.09	1.5	661.8
Inferred	5.55	1.9	331.7
TOTAL	20.14	1.6	1,008.7

Table A2: Combined Mineral Resource Statement for the Murchison Region, includes the Dalgaranga Gold Project (DGP) and Yalgoo Gold Project (YGP)

Dalgaranga Gold Project (DGP)

Category	Tonnes (Mt)	Grade (g/t)	Contained Metal (koz Au)
Measured	0.50	1.0	15.2
Indicated	10.73	1.5	501.4
Inferred	3.67	2.1	248.4
TOTAL	14.9	1.6	765.1

Table A3: The DGP includes in-situ mineral resources for the Never Never Gold Deposit, the Gilbey's Complex Group of Gold Deposits, and the Archie Rose Gold Deposit.

Never Never Gold Deposit Mineral Resource Estimate (DGP)

NEVER NEVER GOLD DEPOSIT – MINING TYPE			
“Open Pit” Resource >0.5gpt Au <270mRL			
Category	Tonnes (Mt)	Grade (g/t)	Contained Metal (koz Au)
Indicated	0.93	2.68	79.9
Inferred	0.17	1.19	6.6
TOTAL	1.10	2.45	86.5
“Underground” Resource >2.0gpt Au >270mRL			
Category	Tonnes (Mt)	Grade (g/t)	Contained Metal (koz Au)
Indicated	0.40	6.00	77.4
Inferred	0.53	8.13	139.2
TOTAL	0.93	7.22	216.6
TOTAL NEVER NEVER GOLD DEPOSIT – MINING TYPE			
Category	Tonnes (Mt)	Grade (g/t)	Contained Metal (koz Au)
Indicated	1.33	3.69	157.3
Inferred	0.71	6.43	145.8
GRAND TOTAL	2.03	4.64	303.1

Table A4: The Never Never Gold Deposit includes in-situ the Gilbey’s North and Never Never Lodes. Reporting cut-off grades are 0.5g/t Au for Open Pit defined mineral resources and 2.0g/t Au for Underground defined mineral resources.

“Gilbey’s Complex” Mineral Resource Estimate (DGP)

Category	Tonnes (Mt)	Grade (g/t)	Contained Metal (koz Au)
Measured	0.50	0.95	15.2
Indicated	9.41	1.06	344.1
Inferred	1.76	0.86	63.6
TOTAL	11.66	1.13	422.9

Table A5: Gilbey’s Complex Mineral Resource Estimate Statement for in-situ resources above 0.5g/t Au (depleted to 31 December 2022)

Apart from mining depletion between 1 July 2022 and 31 December 2022, no material changes have been made to the Gilbey’s Complex (Gilbey’s Main, Sly Fox and Plymouth deposits) MRE since they were released by Gascoyne in September 2022. As such the details of the MRE can be found in ASX release dated 8 September 2022 and titled “Group Gold Resources Increase by 15.6% to 1.37Moz with Resource Grade up by 29%”.

Archie Rose Gold Deposit Mineral Resource Estimate (DGP)

Category	Tonnes (Mt)	Grade (g/t)	Contained Metal (koz Au)
Inferred	1.21	1.01	39.1
TOTAL	1.21	1.01	39.1

Table A6: Archie Rose Initial Mineral Resource statement for in-situ resources above 0.5g/t Au.

No material changes have been made to the Archie Rose deposit MRE since they were released by Gascoyne in September 2022. As such the details of the MRE can be found in ASX release dated 8 September 2022 and titled "Group Gold Resources Increase by 15.6% to 1.37Moz with Resource Grade up by 29%".

Yalgoo Gold Project (YGP)

Category	Tonnes (Mt)	Grade (g/t)	Contained Metal (koz Au)
Indicated	3.35	1.49	160.4
Inferred	1.88	1.37	83.2
TOTAL	5.24	1.45	243.6

Table A7: The YGP includes in-situ mineral resources for the Melville and Applecross Gold Deposits. Reporting cut-off grades are g/t Au.

No material changes have been made to the Melville or Applecross Gold Deposit MRE, as a whole the "Yalgoo Gold Project", since they were released by Gascoyne Resources in December 2021. As such the details of those individual MRE can be found in ASX release dated 6 December 2021 and titled "24% increase in Yalgoo Gold Resource to 243,613oz strengthens Dalgaranga Growth Pipeline".

Gascoyne Region Mineral Resources (GRP)

Category	Tonnes (Mt)	Grade (g/t)	Contained Metal (koz Au)
Indicated	13.73	1.03	455.7
Inferred	2.84	0.89	81.4
TOTAL	16.57	1.01	537.1

Table A8: Gascoyne Region Total Mineral Resource statement includes the Glenburgh Gold Project (GGP) and the Mt Egerton Gold Project (EGP)

No material changes have been made to the Mineral Resource Estimates of the Glenburgh Gold Project or the Mt Egerton Gold Project since they were released by Gascoyne Resources in May 2021. The detail of the Glenburgh MRE can be found in ASX release dated 17 December 2020 and titled "Group Mineral Resources Grow to Over 1.3Moz". Detail for the Mt Egerton MRE can be found in ASX release dated 31 May 2021 and titled "2021 Mineral Resource and Ore Reserve Statements".

Glenburgh Gold Project (GGP)

Category	Tonnes (Mt)	Grade (g/t)	Contained Metal (koz Au)
Indicated	13.5	1.0	430.7
Inferred	2.8	0.9	79.4
TOTAL	16.3	1.0	510.1

Table A9: The Glenburgh Gold Project Mineral Resource Estimate for in-situ resources above 0.25g/t Au for open pit defined mineral resources and above 2.0g/t Au for Underground defined mineral resources.

Mt Egerton Gold Project (EGP)

Category	Tonnes (Mt)	Grade (g/t)	Contained Metal (koz Au)
Indicated	0.23	3.4	25.0
Inferred	0.04	1.5	2.0
TOTAL	0.27	3.1	27.0

Table A10: The Mount Egerton Gold Project Mineral Resource Estimate for in-situ resources above 0.70g/t Au for open pit defined mineral resources.

Competent Persons Statement

The Mineral Resource estimates for the Dalgaranga Gold Project referred to in this presentation are extracted from the ASX announcement dated 23 January 2023 and titled "Never Never Resource Jumps by 183% to 303,100oz with Resource Grade up 99% to 4.64g/t". The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimate in the original market announcement continue to apply and have not materially changed. 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. The Competent Person responsible for reporting of those Mineral Resource estimates was Mr Nicholas Jolly.

The Mineral Resource estimates for the Gilbey's North and Never Never deposits (collectively the "Never Never deposits") referred to in this presentation are extracted from the ASX announcement dated 23 January 2023 and titled "Never Never Resource Jumps by 183% to 303,100oz with Resource Grade up 99% to 4.64g/t". The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimate in the original market announcement continue to apply and have not materially changed. 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. The Competent Person responsible for reporting of those Mineral Resource estimates was Mr Nicholas Jolly.

The Mineral Resource estimates for the Gilbey's, Gilbey's South, Plymouth, Archie Rose and Sly Fox deposits referred to in this presentation are extracted from the ASX announcement dated 8 September 2022 and titled "Gold Resources increase by 15.6% to 1.37Moz with Resource Grade up by 29%". The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimate in the original market announcement continue to apply and have not materially changed.

Information in this announcement relating to exploration results from the Dalgaranga Gold Project (Gilbey's, Gilbey's South, Plymouth, Sly Fox and Gilbey's North / Never deposits) are based on, and fairly represents data compiled by Gascoyne's Senior Exploration Geologist Mr Monty Graham, who is a member of The Australasian Institute of Mining and Metallurgy. Mr Graham has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person under the 2012 Edition of the Australasian Code for reporting of Exploration Results. Mr Graham consents to the inclusion of the data in the form and context in which it appears.

The Mineral Resource estimate for the Yalgoo Gold Project referred to in this announcement is extracted from the ASX announcement dated 6 December 202 and titled "24% Increase in in Yalgoo Gold Resource to 243,613oz Strengthens Dalgaranga Growth Pipeline". The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimate in the original market announcement continue to apply and have not materially changed.

The Mineral Resource estimate for the Glenburgh Project referred to in this announcement is extracted from the ASX announcement dated 18 December 2020 and titled "Group Mineral Resources Grow to Over 1.3M oz". The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimate in the original market announcement continue to apply and have not materially changed.

The Mineral Resource estimate for the Mt Egerton Project referred to in this announcement is extracted from the ASX announcement dated 31 May 2021 and titled "2021 Mineral Resource and Ore Reserve Statements". The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimate in the original market announcement continue to apply and have not materially changed.

Information in this announcement relating to the Glenburgh and Mt Egerton Gold Projects is based on, and fairly represents, data compiled by Gascoyne's Senior Exploration Geologist Mr Monty Graham, who is a member of The Australasian Institute of Mining and Metallurgy. Mr Graham has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person under the 2012 Edition of the Australasian Code for reporting of Exploration Results. Mr Graham consents to the inclusion in this announcement of the data relating to the Glenburgh and Mt Egerton Gold Projects in the form and context in which it appears.

Forward-looking statements

This announcement contains forward-looking statements which may be identified by words such as "believes", "estimates", "expects", "intends", "may", "will", "would", "could", or "should" and other similar words that involve risks and uncertainties. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions regarding future events and actions that, as at the date of this announcement, are expected to take place.

Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, the Directors and management of the Company. These and other factors could cause actual results to differ materially from those expressed in any forward-looking statements.

The Company cannot and does not give assurances that the results, performance or achievements expressed or implied in the forward-looking statements contained in this announcement will actually occur and investors are cautioned not to place undue reliance on these forward-looking statement