

ASX Release

31 December 2023 Half Year Independent Reserves Assessment

- **Net Proved Reserves (1P) of 8.6 MMbo and 23.3 Bcfg, (12.5 MMboe), an increase of approximately 1% compared to 30th June 2023 with additions & revisions offsetting production during the period. Approximately 54% of the 1P is now Proved Developed.**
- **Net Proved and Probable Reserves (2P) of 13.0 MMbo and 28.1 Bcfg (17.7 MMboe), a decrease of approximately 7% over June 2023**
- **Last 6-month production of 239,060 Bo and 0.571Bcfg Net to Byron**

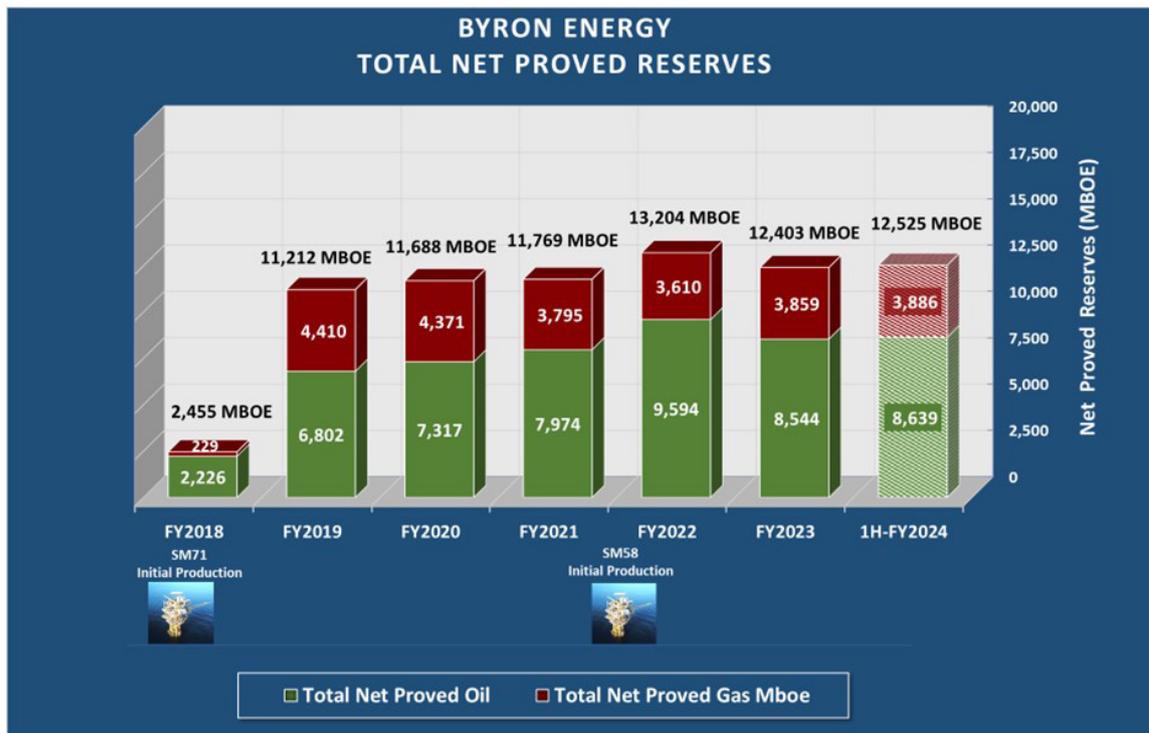


Figure 1: Byron historical annual Total Proved Reserves with 1H/FY2024 shown

Conversion to boe - using a ratio of 6,000 cubic feet of natural gas to one barrel of oil – 6:1 conversion ratio is based on an energy equivalency conversion method and does not represent value equivalency

Byron Energy Limited (Byron or the Company) (ASX: BYE) is pleased to provide a summary of the independently assessed estimates of reserves and resources, as at 31 December 2023, for the Company's projects in the shallow waters of the Gulf of Mexico. The bi-annual report covers Byron's leases comprising producing and exploration properties SM71, SM58, SM57, SM60, SM66, SM69, GI63/72. The independently assessed reserves and resources estimates were prepared by Collarini Associates (Collarini), based in Houston, Texas, USA.

The table below summarizes Byron's Net remaining Reserves and Resources as at 31 December 2023.

Table 1: Remaining Reserves and Prospective Resources, Net to Byron, are as follows:

Byron Energy Limited - Reserves and Resources				
Gulf of Mexico, Offshore Louisiana, USA				
Net Remaining at 31 December, 2023	Category	Oil Mbbl	Gas MMcf	Mboe (6:1)
Proved Developed Producing	PDP	2,598	3,598	3,198
Proved Shut In	PD-S/IN	74	26	78
Proved Behind Pipe	PDBP	2,718	4,445	3,459
Proved Undeveloped	PUD	3,249	15,248	5,790
Proved (1P)	1P	8,639	23,317	12,525
Probable Reserves		4,369	4,743	5,160
Proved and Probable (2P)	2P	13,008	28,060	17,685
Possible Reserves		4,885	5,424	5,789
Proved, Probable & Possible (3P)	3P	17,893	33,484	23,474
Prospective Resources (Best Estimate Unrisked)	PR	20,510	451,506	95,761

Reserves - The aggregate 1P may be a very conservative estimate and the aggregate 3P may be a very optimistic estimate due to the portfolio effects of arithmetic summation

Conversion to boe - using a ratio of 6,000 cubic feet of natural gas to one barrel of oil – 6:1 conversion ratio is based on an energy equivalency conversion method and does not represent value equivalency

Prospective Resource - The estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially recoverable hydrocarbon

Byron has been deemed high and sole bidder on SM70 in the December 2024 Lease Sale #261 but as the block is currently under final review by BOEM it has not yet been officially awarded to Byron, therefore the Prospective Resources attributable to SM70 have not been included in the 31/12/23 Reserve Report

HY 2023 Highlights and Key Factors contributing to changes in reserves and resources since 30 June 2023

The Company's Total Proved Reserves (1P) as at 31 December 2023 increased by approximately 1% from 30 June 2023 to 31 December 2023 to 8.64 Million barrels of oil (Mmbo) and 23.3 Billion cubic feet of gas (Bcfg), or 12.5 million barrels of oil equivalent (Mmboe). 2P reserves decreased slightly, by approximately 7% to 17.7 Mmboe.

The Company's Prospective Resources as at 31 December 2023 increased by approximately 81% from 30 June 2023 to 95.8 Mmboe after accounting for the addition of a prospect on SM66 and the acquisition of the SM60 Lease Block which was acquired in the December 2023 GOM Lease Sale #261. Although Byron was also deemed high bidder on SM70, the lease has not yet been awarded and is therefore not included in Byron's Prospective Resources in this release.

Distribution of 1P and 2P Reserves by Field is shown in the table below with approximately 54% of Byron's Proved Reserves and 48% of the 2P Reserves now developed.

Table 2: Net Remaining Reserves by Field:

Byron Energy Limited - Remaining Reserves					
Net to Byron					
31 December, 2023	Developed		Undeveloped		Total
	Oil	Gas	Oil	Gas	Mboe
	Mbbl	MMcf	Mbbl	MMcf	(6:1)
SM71					
Proved (1P)	833	683	735	412	1,751
Probable Reserves	463	391	619	703	1,264
Proved and Probable (2P)	1,296	1,074	1,354	1,115	3,015
SM 58					
Proved (1P)	3,975	7,073	2,046	13,988	9,531
Probable Reserves	963	1,169	2,298	2,471	3,868
Proved and Probable (2P)	4,938	8,242	4,344	16,459	13,399
SM 58/69 (includes E2)					
Proved (1P)	582	315	468	849	1,244
Probable Reserves	26	9	-	-	28
Proved and Probable (2P)	608	324	468	849	1,272
Total					
Proved (1P)	5,390	8,071	3,249	15,249	12,526
Probable Reserves	1,452	1,569	2,917	3,174	5,160
Proved and Probable (2P)	6,842	9,640	6,166	18,423	17,685

(i) Reserve Additions/Revisions:

- *Total* Proved Reserves remained nearly unchanged at 12.5 Mmboe, with 101% total Proved Reserve replacement from 30 June 2023 at 12.4 Mmboe for a five and one-half consecutive years of near or greater than 100% Total Net Proved Reserve replacement (see Figure 1). Total Proved Reserves changes were characterised by the 1 July 2023 to 31 December 2023 net production of 0.334 MMboe (239 MBO & 0.571 Bcfg)) being largely offset by additions & revisions to the total proved reserves noted below.
 - *Net Additions* during the period of 0.244 MMbo and 0.746 Bcfg, or 0.368 MMboe to the Total Proved reserves is attributable to the addition of oil and gas reserves associated with the drilling of the SM58 G6 well.
 - *Net Revisions* during the period of 0.099 MMbo and 0.008Bcfg, or 0.101 MMboe to the Total Proved reserves is largely attributable to the drilling of the SM58 G6 well.
- **Prospective Resources Additions/Revisions:**

The increase in Prospective Resources was due to the addition of approximately 43.5 Mboe of Net Prospective Resources, being a combined 2.7 MMbo and 244.9 Bcfg at SM60 and SM66.

(iii) Portfolio Acquisitions/Divestitures/Relinquishments:

- As announced on 21 December 2023, Byron was deemed high and sole bidder on two blocks in the December GOM Lease Sale #261, SM60 and SM701. SM60 was awarded on February 2, 2024 and is now reflected in the Company's Prospective Resource portfolio while SM70, as of the date of this release is in the final review process prior to award has NOT been included in the Prospective Resource numbers but will be reflected in the annual reserve report as of 30 June, 2024 if awarded.

Further details on proved and probable reserves and prospective resources are included in appendices A, B, C and D.

Authorised by: Board of Directors

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About Byron:

Byron Energy Limited ("Byron or the Company") (**ASX: BYE**) is an independent oil and natural gas exploration and production company, headquartered in Australia, with operations in the shallow water offshore Louisiana in the Gulf of Mexico. The Company has grown through exploration and development and currently has working interests in a portfolio of leases in federal and state waters. Byron's experienced management team has a proven record of accomplishment and of advancing high quality oil and gas projects from exploration to production in the shallow water in the Gulf of Mexico. For more information on Byron please visit the Company's website at www.byronenergy.com.au.

Glossary

Bbl = barrels
Bcf = billion cubic feet
Bcfg = billion cubic feet of gas
Bo/bo = barrels of oil
Boe/boe = barrels of oil equivalent
Bopd/bopd = barrels of oil per day
Btu = British Thermal Units
mcfg = thousand cubic of gas
MMcfg = million cubic feet of gas
mcfcpd = thousand cubic feet of gas per day

MMcf = million cubic feet
mbo/mbbl = thousand barrels of oil
MMbo/MMbbl = million barrels of oil
Mbo = thousand barrels of oil
mboe = thousand barrels of oil equivalent
MMboe = million barrels of oil equivalent
mcf = thousand cubic feet
MMcf = million cubic feet
MMbtu = million British Thermal Units

Appendix A - Oil and Gas Properties as at 31 December 2023

As of 31 December 2023, Byron's portfolio of properties, all in the shallow waters of the Gulf of Mexico, USA comprised: -

Properties	Operator	Interest WI/NRI* (%)	Lease Expiry Date	Area (Km ²)
South Marsh Island Block 71	Byron	50.00/40.625	Held by Pod'n	12.16
South Marsh Island Block 57	Byron	100.00/81.25	April 2028	21.98
South Marsh Island Block 61	Byron	100.00/87.50	September 2027	20.23
South Marsh Island Block 58 (Excl. E1 well)	Byron	100.00/83.33**	Held by Prod'n	20.23
South Marsh Island Block 58 (E1 well in S ½ of SE ¼ of SE ¼ and associated production infrastructure in NE ¼ of NE ¼ of SM69)	W&T Offshore	53.00/44.167		
South Marsh Island Block 69 (NE ¼ of NE ¼)	Byron	70.00/58.33***	Held by Prod'n	1.3
South Marsh Island Block 66	Byron	100.00/87.50	December 2025	20.23
Grand Isle 63	Byron	100.00/81.25	April 2028	20.23
Grand Isle 72	Byron	100.00/81.25	April 2028	20.23

* Working Interest ("WI") and Net Revenue Interest ("NRI").

** 100.00% WI to a depth of 13,639 feet TVD and 50% WI below 13,639 feet TVD.

*** Effective 1 January 2023 Byron's 100% WI and 80.33% NRI in the SM69 E2 well reduced to 70% WI with an unburdened 58.33% NRI, after WT Offshore exercised its option to convert its overriding royalty interest into a 30% working interest in the E2 well which achieved payout in December 2022.

The table above excludes SM60 and the SM70 leases as these leases had not been awarded as of 31 December 2023. Byron was the high bidder at the Gulf of Mexico, Outer Continental Shelf (OCS) Lease Sale 261 held in New Orleans, Louisiana on Wednesday, 20 December 2023. A high bid is subject to OCS bid adequacy review and under BOEM rules may be rejected if deemed inadequate. The BOEM review process can take up to 90 days.

Appendix B - Additional information on remaining reserves as at December 2023

Reserves Summary

1P and 2P total changes to reserves:

Proved Reserves (1P net to Byron) as at 31 December 2023 were 8.6 MMbbl of oil and 23.3 Bcf of gas or 12.5 MMboe, compared to 8.5 MMbbl of oil and 23.2 Bcf of gas, 12.4 MMboe, as at 30 June 2023.

Proved and Probable Reserves (2P net to Byron) as at 31 December 2023 were 13.0 Mmbbl of oil and 28.1 Bcf of gas, 17.7 MMboe, compared to 13.8 MMbbl of oil and 31.0 Bcf of gas, 19.0 MMboe, as at 30 June 2023.

Byron's year on year Byron's 1P reserves increased by 1% or 0.1 MMboe (or just over the 6 month net production from 7/1/2023- 12/31/2023 of 239 Mbo and 0.571 Bcfg), while 2P reserves decreased by approximately 7% or 1.3 MMboe.

Remaining reserves - developed versus undeveloped:

The following table shows a split of Byron's net remaining reserves, as at 30 June 2023, into developed and

Byron Energy Limited - Remaining Reserves					
Net to Byron					
31 December, 2023	Developed		Undeveloped		Total
	Oil	Gas	Oil	Gas	Mboe
	Mbbl	MMcf	Mbbl	MMcf	(6:1)
Proved (1P)	5,390	8,071	3,249	15,249	12,526
Probable Reserves	1,452	1,569	2,917	3,174	5,160
Proved and Probable (2P)	6,842	9,640	6,166	18,423	17,685
Possible	1,276	1,362	3,611	4,061	5,791
Proved, Probable + Possible (3P)	8,118	11,002	9,777	22,484	23,476

Reserves reconciliation

The following table reconciles the movement in Byron's reserves between 30 June 2023 and 31 December 2023.

Byron Energy Limited Reserves (Net to Byron) Gulf of Mexico, offshore Louisiana, USA								
Reserves Reconciliation	Oil (Mbbl) (Net to Byron)				Gas (MMcf) (Net to Byron)			
	Remain- ing 30/6/23	Produc- tion HY 2023	Additions Revisions HY 2023	Remain- ing 31/12/23	Remain- ing 30/6/23	Produc- tion HY 2023	Additions Revisions HY 2023	Remain- ing 31/12/23
Proved (1P)	8,544	-239	334	8,639	23,154	-570	733	23,317
Probable Reserves	5,232	0	-863	4,369	7,893	0	-3,150	4,743
Proved and Probable (2P)	13,964	-239	-529	13,008	31,047	-570	-2,417	28,060
Possible Reserves	4,813	0	72	4,885	5,364	0	60	5,424
Proved, Probable & Poss. (3P)	18,777	-239	-457	17,893	36,411	-570	-2,357	33,484

Appendix C –Prospective Resources as at 31 December 2023

The following table shows prospective resources as of 31 December 2023 and a comparison of changes between 30 June and 31 December 2023.

Byron Energy Limited Prospective Resources (net to Byron)			
Gulf of Mexico, offshore Louisiana, USA			
Best Estimate Unrisked 31 December, 2023	Oil	Gas	Mboe
	Mbbl	MMcf	(6:1)
SM 71	963	19,152	4,155
SMI 58	11,654	39,598	18,254
SMI 58/69	538	539	628
GI 63/72	4,632	147,353	29,191
SM 60	2,174	193,919	34,494
SM 66	549	50,945	9,040
Total Prospective Resources (12/31/2023)	20,510	451,506	95,761
Total Prospective Resources (6/30/2023)	18,350	208,186	53,048

Material Changes to Prospective Resources

- SM60 was re-acquired via lease sale during the period.
 - o SM60 has 193.9 Bcfg and 2.2 MMbo of Net Prospective Resources

Appendix D - Notes to Reserves and Resources Statement

Reserves and Resources Governance

Byron's reserves estimates are compiled annually. Byron engages Collarini and Associates, a qualified external petroleum engineering consultant, to conduct an independent assessment of the Company's reserves. Collarini and Associates is an independent petroleum engineering consulting firm that has been providing petroleum consulting services in the USA for more than fifteen years. Collarini and Associates does not have any financial interest or own any shares in the Company. The fees paid to Collarini and Associates are not contingent on the reserves outcome of the reserves report.

Competent Persons Statement

The information in this report that relates to oil and gas reserves and resources was compiled by technical employees of independent consultants Collarini and Associates, under the supervision of Mr Mitch Reece BSc PE. Mr Reece is the President of Collarini and Associates and is a registered professional engineer in the State of Texas and a member of the Society of Petroleum Evaluation Engineers (SPEE), Society of Petroleum Engineers (SPE), and American Petroleum Institute (API). The reserves and resources included in this report have been prepared using definitions and guidelines consistent with the 2007 Society of Petroleum Engineers (SPE)/World Petroleum Council (WPC)/American Association of Petroleum Geologists (AAPG)/Society of Petroleum Evaluation Engineers (SPEE) Petroleum Resources Management System (PRMS). The reserves and resources information reported in this Statement are based on, and fairly represents, information and supporting documentation prepared by, or under the supervision of, Mr Reece. Mr Reece is qualified in accordance with the requirements of ASX Listing Rule 5.41 and consents to the inclusion of the information in this report of the matters based on this information in the form and context in which it appears.

Reserves Cautionary Statement

Oil and gas reserves estimates are expressions of judgment based on knowledge, experience and industry practice. Estimates that were valid when originally calculated may alter significantly when new information or techniques become available. Additionally, by their very nature, reserve and resource estimates are imprecise and depend to some extent on interpretations, which may prove to be inaccurate. As further information becomes available through additional drilling and analysis, the estimates are likely to change. This may result in alterations to development and production plans which may, in turn, adversely impact the Company's operations. Reserves estimates and estimates of future net revenues are, by nature, forward looking statements and subject to the same risks as other forward looking statements.

Prospective Resources Cautionary Statement

The estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially recoverable hydrocarbons.

Forward Looking Statements

This document may contain forward-looking information. Forward-looking information is generally identifiable by the terminology used, such as "expect", "believe", "estimate", "should", "anticipate" and "potential" or other similar wording. Forward-looking information in this document includes, but is not limited to, references to: well drilling programs and drilling plans, estimates of potentially recoverable resources, and information on future production and project start-ups. By their very nature, the forward-looking statements contained in this document require Byron and its management to make assumptions that may not materialise or that may not be accurate. Although Byron believes its expectations reflected in these statements are reasonable, such statements involve risks and uncertainties, and no assurance can be given that actual results will be consistent with these forward-looking statements.

Pricing Assumptions (in US\$)

Oil prices used in this report represent January 3, NYMEX West Texas Intermediate (WTI) Strip prices starting on January 1, 2024, of \$72.883 per barrel. Beginning January 1, 2025, the Reuters Poll consensus pricing was used with a starting price of \$79.67 per barrel and with a final price of \$83.40 per barrel on January 1, 2027, then held constant thereafter. Gas prices used in this report represent a Henry Hub base January 3, NYMEX Strip prices starting on January 1, 2024, of \$2.648 per MMBtu. Beginning January 1, 2025, the Reuters Poll consensus pricing was used with a starting price of \$3.850 per MMBtu, increasing to \$4.000 per MMBtu on January 2027 then held constant thereafter. These prices were then adjusted to account for transportation cost, basis difference, Light Louisiana Sweet (LLS) vs WTI oil gravity. It is assumed that the products are sold on the spot market with delivery at the sales point on the production facilities.

ASX Reserves and Reporting Notes

- (i) The reserves and prospective resources in this document are as at 31 December 2023 (Listing Rule (LR) 5.25.1)
- (ii) The reserves and prospective resources information in this document has been estimated and is classified in accordance with SPE-PRMS (Society of Petroleum Engineers - Petroleum Resources Management System) (LR 5.25.2)
- (iii) The reserves and prospective resources in this document are reported according to the Company's economic interest in each of the reserves and prospective resources net of royalties (LR 5.25.5)
- (iv) The reserves and prospective resources information in this document has been estimated and prepared using the deterministic method (LR 5.25.6)
- (v) The reserves and prospective resources in this document have been estimated using a 6:1 BOE conversion ratio for gas to oil; 6:1 conversion ratio is based on an energy equivalency conversion method and does not represent value equivalency (LR 5.25.7)
- (vi) The reserves and prospective resources in this document have been estimated on the basis that products are sold on the spot market with delivery at the sales point on the production facilities (LR 5.26.5)
- (vii) The method of aggregation used in calculating estimated reserves was the arithmetic summation by category of reserves. As a result of the arithmetic aggregation of the field totals, the aggregate 1P may be a very conservative estimate and the aggregate 3P may be a very optimistic estimate due to the portfolio effects of arithmetic summation (LR 5.26.7 & 5.26.8)
- (viii) Prospective resources are reported on a best estimate basis (LR 5.28.1)
- (ix) For prospective resources, the estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons (LR 5.28.2)

ASX LR 5.35 Additional Prospective Resources information for SM60 (reported for the first time)

(i) In respect to the prospective resources referred to in this statement, Byron acquired SM60 (approx. 5,000 acres) at the BOEM Lease Sale 261 held in December 2023, located in the shallow waters of the Gulf of Mexico, offshore Louisiana, USA (LR 5.35.1).

(ii) The prospective resources have been estimated on the following basis (LR 5.35.2):-

- *prospective resources have been identified near the existing developed and undeveloped reserves, at the same or deeper stratigraphical levels but are deemed isolated from mapped reserves;*
- *a combination of volumetric assessment and field analogues have been used to estimate the prospective resources; exploration drilling will be required to assess these resources.*

(ii) The chance of discovery is considered moderate as the prospective resources are near developed and undeveloped reserves and in a proven oil and gas producing province. There is a risk that exploration will not result in sufficient volumes of oil and/or gas for a commercial development (LR 5.35.3).

(xii) Prospective resources are un-risked and have not been adjusted for an associated chance of discovery and a chance of development (LR 5.35.4).