

ASX: CRD

# Aceh: Prospective Resources in Excess of 11 Tcf (Net)

# Highlights

Conrad Asia Energy Ltd (ASX: CRD) (the "Company" or "Conrad"), an ASX-listed Asia-focused natural gas exploration and development company, is pleased to provide its first assessment of the Prospective Resources of its two Aceh PSCs offshore Indonesia, Offshore North West Aceh (Meulaboh) ("ONWA") and Offshore South West Aceh (Singkil) ("OSWA") Production Sharing Contracts ("PSCs"). Conrad has uncovered the potential of the region which includes discovered gas in the shallow-water areas described below and exploratory potential in the deeper waters.

- 38 leads have been identified in the two PSCs containing combined Prospective Resources in excess of 15 trillion cubic feet ("Tcf") of recoverable gas (P50, 100%) of which c 11 Tcf (P50) are net attributable<sup>1</sup> to Conrad.
- Four of these leads individually have Prospective Resource potential of over 1.0 Tcf of recoverable gas (P50, 100%).
- Seismic studies revealed the presence of direct hydrocarbon indicators ("DHIs") including gas chimneys at many of the leads.
- The leads are located 20-60 kms offshore, in water depths ranging from <100m to >1000m.
- Conrad also has four gas discoveries in the shallower water areas in the same PSCs, giving confidence that a working
  petroleum system exists within the PSCs.
- The shallow-water areas hold an estimated gross (100%) 2C Contingent Resource of 214 billion cubic feet (Bcf) of sales gas (161 Bcf net attributable to Conrad)<sup>2</sup> in three of the four discovered gas accumulations in the two PSCs with an independently assessed net present value ("NPV") of US\$88 million.
- The Prospective Resources in the shallow-water area, in the vicinity of the existing discoveries, have not been included in this current resource assessment. The historical exploratory success rate in the Upper Miocene carbonates in the shallow-water area is 66% based on 1970s 2D seismic<sup>3</sup>. Conrad plans a 3D seismic survey and 2D seismic reprocessing in these areas and will provide resource estimates and chances of success thereafter.
- Despite the discovered resources in the shallow-water areas, ONWA and OSWA are classified as "frontier" (underexplored) areas by the Indonesian government, and therefore enjoy higher contractor take than the Indonesian default, providing highly attractive fiscal terms for commercial development, in both the shallow- and deep-water.

# **Cautionary Statement**

The estimated quantities of gas 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.

<sup>&</sup>lt;sup>1</sup> Net attributable assumes 72% contactor take for gas as set out in the ONWA PSC Agreement. No transfer of 10% Participating Interest to Local Government Operating Company assumed.

<sup>&</sup>lt;sup>2</sup> Competent Person's Report (CPR) for Meulaboh and Meulaboh East Discoveries in the Offshore North West Aceh and the Singkil Discovery in the Offshore South West Aceh PSCs by THREE60 Energy (Singapore) Pte Ltd 15 May 2023. Resources attributable to Conrad are based on Conrad's participating interest of 100% in the Aceh PSCs

<sup>&</sup>lt;sup>3</sup> Four from six wells drilled to test the Upper Miocene carbonates discovered gas.



Conrad Managing Director and Chief Executive Officer, Miltos Xynogalas, commented:

"The ONWA & OSWA PSCs continue to evolve into a major project area for Conrad. The CPRs of the discovered resources in the shallower waters increased Conrad's net 2C Contingent Resources by 75% (increased from 215 Bcf to 376 Bcf) and now the world-class deeper water exploratory potential has added an enormous quantum of prospective upside."

"Today's announcement is the first report that Conrad has released on the Prospective Resources, where several large structures with multi-Tcf potential have been identified. Seismic studies of these structures show DHIs (gas chimneys and flat spots), signifying the presence of hydrocarbons. The future programme, involving reprocessing of existing 2D seismic and acquiring additional 3D seismic data will enable us to refine our estimates of gas volumes and chances of discovery."

"Conrad has a significant portfolio of gas projects in the world's fastest growing gas consumption region. In addition to the Mako gas project in West Natuna, we have 15 Tcf of unrisked prospective recoverable gas potential (P50, 100%) in Aceh along with discovered resources in the same area. Mako remains the near-term focus, where we recently signed a Term Sheet to supply gas to Singapore and expect to finalise the Gas Sales Agreement in the coming months. The importance of natural gas to Asian economies is becoming increasingly important and this is now the obvious fuel of choice in the energy transition."

# BACKGROUND

Conrad first began evaluating the ONWA and OSWA when it was awarded joint studies over those areas in 2019. PSCs over the areas were awarded to Conrad in January 2023. The PSCs cover approximately 20,000 square kilometres (Figure 1) with each PSC having a 30-year tenure.

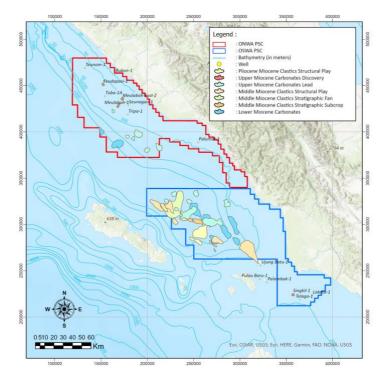


Figure 1 – Location Map of ONWA and OSWA PSCs



Conrad completed independent Competent Persons Reports ("CPRs")<sup>4</sup> covering the discovered biogenic gas resources in the shallow-water areas of the Aceh PSCs. The CPRs estimate a gross (100%) 2C Contingent Resource of 214 Bcf of sales gas (161 Bcf net attributable to Conrad) in three of the four discovered gas accumulations in the two PSCs. The net attributable resource is the commercial resource attributable to Conrad after the government fiscal take. The CPR was prepared by THREE60 Energy and ascribed a net present value ("NPV") of US\$88 million to the Aceh PSCs net attributable to Conrad. Conrad has continued to identify and evaluate commercialisation options for the discovered gas resources. An independent study on these options is underway and is expected to be completed soon.

As part of its Year 1 (2023) PSC work obligations, Conrad has been evaluating the prospectivity of the two PSCs through the interpretation of approximately 17,000-line kilometres of existing 2D seismic data and analysis of 16 wells that lie within or adjacent to the PSCs. This announcement provides an update on Prospective Resources principally in the deeper water of the blocks.

The PSCs lie within the Sumatra forearc basin which is comprised of a substantial sedimentary sequence of rocks dating from the Paleogene to Pleistocene eras. The basin exhibits a northwest-southeast orientation and is situated between Sumatra and the outer-arc ridge to the west. Within the basin, both thermogenic and biogenic petroleum systems have been identified. Shallow-water discoveries in Upper Miocene carbonates confirm the presence of a working biogenic gas system in the basin.

Several distinctive petroleum play types are common to the two PSCs (Figure 2) including:

- Pliocene sandstones in both structural and stratigraphic traps;
- Upper Miocene carbonate build-ups (reef systems, platforms, pinnacles);
- Miocene slope sandstones (submarine fan deposits) in structural, stratigraphic and sub crop traps; and
- Lower-Middle Miocene carbonate build-ups (reef systems, platforms, pinnacles).

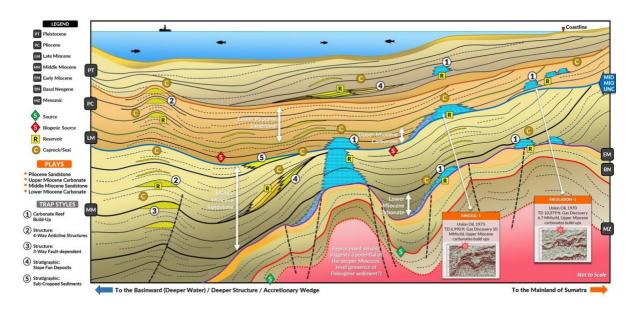


Figure 2 - Play Concept Diagram

Several DHIs, including gas chimneys, indicate the potential presence of hydrocarbons at many of the leads.

<sup>&</sup>lt;sup>4</sup> Conrad Asia Energy Ltd ASX announcements on 16 and 18 May 2023.



Prospective Resources for the shallow-water area, in the vicinity of the existing discoveries are the subject of ongoing work and have not been included in this current resource assessment. The historical exploratory success rate in this shallow-water area is 66% based on 1970s 2D seismic. Conrad plans a 3D seismic survey and 2D seismic reprocessing in these areas and will provide resource estimates and chances of success thereafter. Each PSC also carries a work obligation for one well to be drilled in Year 3 of the PSC (i.e. during 2025).

#### OFFSHORE NORTH WEST ACEH (MEULABOH) PSC ("ONWA")

100% Participating Interest, Operator

The ONWA PSC covers an area of 9,182 square kilometres within the offshore Sibolga Basin. The PSC contains the previously reported shallow-water Meulaboh, Meulaboh East and Keudapasi gas discoveries (Figure 3). The Contingent Resources and Estimated Ultimate Recovery of these Upper Miocene carbonate discoveries were disclosed in Conrad's ASX announcements on 16 and 18 May 2023. Potential new leads within the vicinity of these discoveries will be the focus of planned 3D seismic that is expected to be shot during 2024.

Within the PSC, eight new leads have been identified in deep-water Lower and Upper Miocene carbonate build-ups with combined unrisked Prospective Resources of 910 Bcf (P50, 100%) of which 656 Bcf (P50) are net attributable to Conrad. The areal distribution of these leads and discovered resources are shown in Figure 3 below:

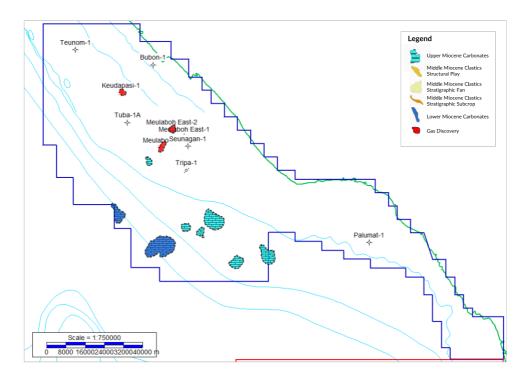


Figure 3– ONWA PSC - Discoveries and Leads Map

Table 1, below, summarises the unrisked Prospective Resources within the PSC and the associated chance of discovery. Chances of development have yet to be determined<sup>5</sup>. The estimates of Prospective Resources were derived through the review of an extensive data suite that included mapping of some 17,000-line kilometres of 2D seismic data, reservoir properties derived from the well logs from the 16 wells within and immediately adjacent to the PSCs. The volumes were calculated using probabilistic methods and are unrisked.

<sup>&</sup>lt;sup>5</sup> Quantifying the chance of development requires consideration of both economic and other issues, such as legal, regulatory, market access, political, social license, internal and external approvals and commitment to project finance and development timing. Many of these factors are currently uncertain and have yet to be determined.



			Prospective Resources (Bcf)						Chance of
Water Depth	Lead	Play / Trap	Gross (100%)			Net Attributable (to Conrad)			Discovery
			Low (P90)	Best (P50)	High (P10)	Low (P90)	Best (P50)	High (P10)	(%)**
Deep-Water	UM-12	Upper Miocene Carbonates	127	363	837	92	262	604	16
	LM-2	Lower Miocene Carbonates	33	209	745	24	151	537	19
	UM-14	Upper Miocene Carbonates	18	82	285	13	59	206	19
	LM-1	Lower Miocene Carbonates	23	87	269	17	63	194	19
	UM-15	Upper Miocene Carbonates	15	72	206	11	52	149	14
	UM-13	Upper Miocene Carbonates	14	42	105	10	30	76	14
	UM-11	Upper Miocene Carbonates	8	26	70	6	19	50	12
Shallow-Water	UM-10	Upper Miocene Carbonates	9	29	69	6	21	50	16
Total (arithmetic addition)			247	910	2,586	178	656	1,865	

\* Net Attributable assumes 72% contractor take for gas as set out in the OSWA PSC Agreement and excludes benefits of cost recovery. No transfer of 10% Participating Interest to Local Government Operating Company assumed.

\*\* Chance of Development has yet to be assessed.

#### Table 1 – ONWA PSC – Leads & Unrisked Prospective Resources

The aggregate low estimates shown in Tables 1, 2 and 3, may be a very conservative estimate and the aggregate high estimate may be a very optimistic estimate due to the portfolio effects of arithmetic summation.

#### OFFSHORE SOUTH WEST ACEH (MEULABOH) PSC ("OSWA")

100% Participating Interest, Operator

OSWA PSC covers an area of 10,700 square kilometres within the offshore Sibolga Basin. The PSC contains the previously reported Singkel gas discovery. The Contingent Resources of these Upper Miocene carbonate discoveries were disclosed in Conrad Asia Energy Ltd's ASX announcements on 16 and 18 May 2023. The areal distribution of these leads and discovered resources are shown in Figure 4 below:

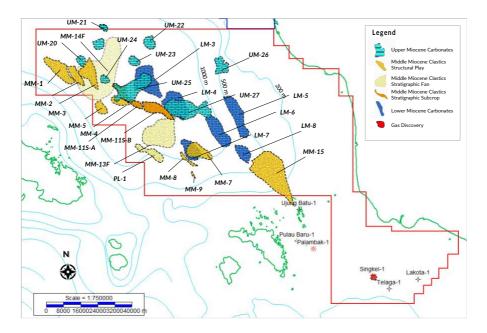


Figure 4 - OSWA PSC - Discoveries and Leads Map

Within the OSWA PSC, 30 leads have been identified within the Miocene carbonate build-ups and clastic structural play, Mid-Miocene stratigraphic traps (deep-sea fans) with combined unrisked Prospective Resources of 14.6 Tcf (P50, 100%) of which



10.4 Tcf are net attributable to Conrad.

Table 2, below, summarises the unrisked Prospective Resources within the PSC and the associated chance of discovery. Chances of development have yet to be determined<sup>5</sup>. The estimates of Prospective Resources were derived through the review of an extensive data suite that included mapping of some 17,000-line kilometres of 2D seismic data, reservoir properties derived from the well logs from the 16 wells within and immediately adjacent to the PSCs. The volumes were calculated using probabilistic methods and are unrisked.

			Prospective Resources (Bcf)						
Water Depth	Lead	Play / Trap	Gross (100%)			Net Attributable (to Conrad)			Discovery
			Low (P90)	Best (P50)	High (P10)	Low (P90)	Best (P50)	High (P10)	(%)**
	MM-3	Mid Miocene Clastics - Structural Play	763	2,353	5,574	550	1,697	4,020	16
	PL-1	Pliocene Miocene Clastics - Structural Play	614	1,848	4,615	443	1,333	3,328	22
	LM-3	Lower Miocene Carbonates	275	1,414	4,195	198	1,020	3,025	16
	MM-15	Mid Miocene Clastics - Structural Play	345	1,179	3,267	249	850	2,356	15
	MM-2	Mid Miocene Clastics - Structural Play	202	926	2,994	146	668	2,159	16
	MM-14F/SF-B3b	Mid Miocene Clastics - Stratigraphic Fan	224	773	2,131	162	557	1,537	12
	MM-11S-B	Mid Miocene Clastics - Stratigraphic Subcrop	122	710	2,008	88	512	1,448	14
	LM-5	Lower Miocene Carbonates	138	669	1,565	100	482	1,129	22
	MM-1	Mid Miocene Clastics - Structural Play	152	648	1,950	110	467	1,406	16
	MM-13F/SFA	Mid Miocene Clastics - Stratigraphic Fan	179	579	1,285	129	418	927	13
	MM-7	Mid Miocene Clastics - Structural Play	128	510	1,469	92	368	1,059	16
	MM-11S-A	Mid Miocene Clastics - Stratigraphic Subcrop	82	329	847	59	237	611	14
	LM-4	Lower Miocene Carbonates	59	291	900	43	210	649	16
	MM-14F/SF-B2a	Mid Miocene Clastics - Stratigraphic Fan	76	282	803	55	203	579	12
Deer Mister	MM-5	Mid Miocene Clastics - Structural Play	56	280	925	40	202	667	12
Deep-Water	LM-8	Lower Miocene Carbonates	65	263	599	47	190	432	15
	UM-25	Upper Miocene Carbonates	37	197	736	27	142	531	18
	LM-6	Lower Miocene Carbonates	53	197	494	38	142	356	13
	MM-4	Mid Miocene Clastics - Structural Play	30	165	588	22	119	424	16
	MM-8	Mid Miocene Clastics - Structural Play	45	133	337	32	96	243	16
	MM-14F/SF-B3a	Mid Miocene Clastics - Stratigraphic Fan	23	96	302	17	69	218	12
	LM-7	Lower Miocene Carbonates	25	96	261	18	69	188	13
	MM-9	Mid Miocene Clastics - Structural Play	22	87	269	16	63	194	15
	UM-24	Upper Miocene Carbonates	31	84	189	22	61	136	15
	UM-23	Upper Miocene Carbonates	16	65	189	12	47	136	15
	UM-20	Upper Miocene Carbonates	20	56	132	14	40	95	10
	UM-22	Upper Miocene Carbonates	12	46	136	9	33	98	15
	UM-26	Upper Miocene Carbonates	11	45	178	8	32	128	13
	UM-27	Upper Miocene Carbonates	6	37	113	4	27	81	19
	UM-21	Upper Miocene Carbonates	5	16	45	4	12	32	19
		Total (arithmetic addition)	3,816	14,374	39,096	2,752	10,366	28,194	

\* Net Attributable assumes 72% contractor take for gas as set out in the OSWA PSC Agreement and excludes benefits of cost recovery. No transfer of 10% Participating Interest to Local Government Operating Company assumed.

\*\* Chance of Development has yet to be assessed.

Table 2 – OSWA PSC – Leads & Unrisked Prospective Resources

# SUMMARY PROSPECTIVE RESOURCES ONWA & OSWA

Several distinct petroleum play types are common to the ONWA and OSWA PSCs.

The proven shallow-water Upper Miocene Carbonate play, in which the existing biogenic gas discoveries are found, will be the



focus of planned 3D seismic acquisition during 4Q 2024.

The Prospective Resources identified to date, especially in the deeper waters of the two PSCs, are summarised in Table 3 below:

			Prospective Resources (Bcf)						Chance of
Water Depth	PSC	Play	Gross (100%)			Net Attributable (to Conrad)			Discovery
			Low (P90)	Best (P50)	High (P10)	Low (P90)	Best (P50)	High (P10)	(%)**
Deep-Water	ONWA + OSWA	Pliocene Miocene Clastics - Structural Play	614	1,848	4,615	443	1,333	3,328	22
	ONWA + OSWA	Upper Miocene Carbonates	320	1,131	3,221	231	816	2,323	10 - 19
	ONWA + OSWA	Mid Miocene Clastics	2,449	9,050	24,749	1,766	6,526	17,848	12 - 16
	ONWA + OSWA	Lower Miocene Carbonates	671	3,226	9,028	484	2,326	6,511	13 - 22
Shallow-Water	ONWA	Upper Miocene Carbonates	9	29	69	6	21	50	16
Total (arithmetic addition)			4 063	15,284	41 682	2 930	11.022	30.059	

\* Net Attributable assumes 72% contractor take for gas as set out in the OSWA PSC Agreement and excludes benefits of cost recovery. No transfer of 10% Participating Interest to Local Government Operating Company assumed.

\*\* Chance of Development has yet to be assessed.

Table 3 – ONWA & OSWA PSCs - Unrisked Prospective Resources by Play

#### **Cautionary Statement**

The estimated quantities of gas 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.

#### **FUTURE WORK**

The Company plans to acquire additional data from geological fieldwork carried out in adjacent onshore areas, as well as from petrographic and geochemical analyses of available cuttings and core samples from past wells drilled in the PSCs.

Reprocessing of the existing 2D seismic data within the PSCs is planned. In addition, the Company has commenced planning to acquire 500 square kilometres of modern 3D seismic data in each PSC in 2024, seeking to delineate near field, low-risk drilling opportunities in the shallow-water areas as well as continuing to evaluate the deep-water prospective targets where c 15 Tcf of recoverable gas (P50, 100%) has been identified with a view to attract partners into this project area.

Authorised by the Board.

#### For more information, please contact:

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#### About Conrad and its Projects

Conrad is an Asia-focused natural gas exploration and production company concentrated on the shallow-waters offshore Indonesia, and via its wholly owned subsidiaries, is the holder of several operated tenements in the form of Production Sharing



Contracts. The Company's flagship project is the Mako Gas Field located in the Natuna Sea in the shallow offshore waters of Indonesia. Mako lies along a large natural gas pipeline to Singapore, which supplies high-value natural gas into Singapore primarily for electricity generation. The Mako gas field is one of the largest gas discoveries in the region.

The Company specialises in the identification and acquisition of undervalued, overlooked, and/or technically misunderstood gas assets, and has developed expertise in maturing such assets through subsurface technical work, appraisal drilling and an innovative approach to low-cost field development.

The Board and management have a proven track record of value creation and deep industry experience with oil majors, midcap E&P and the upstream investment community, together with a successful track record of bringing exploration and development projects into production, with Peter Botten the founder and Chairman of Oil Search adding enormous depth and experience as Chairman of Conrad.

## Notes on Petroleum Resource Estimates

The volumes quoted herein have been assessed per the definitions of the Society of Petroleum Engineers (SPE) Petroleum Resources Management System (PRMS) issued in March 2018 (https://www.spe.org/en/industry/petroleum-resources-management-system-2018/) ("SPE PRMS 2018"). The estimates of Prospective Resources were derived through the review of an extensive data suite that included mapping of some 17,000-line kilometres of 2D seismic data, reservoir properties derived from the well logs from the 16 wells within and immediately adjacent to the PSCs. The volumes were calculated using probabilistic methods and are unrisked.

Under the SPE PRMS 2018, Prospective Resources are "those quantities of petroleum that are estimated, as of a given date, to be potentially recoverable from undiscovered accumulations". Volumes are reported using the terms low estimate, best estimate and high estimate.

The estimates of Prospective Resources and Contingent Resources contained herein are current to the date of this document. The Company is not aware of any new information or data that materially affects the estimates of Prospective Resources, and the material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

#### **Qualified Petroleum Reserves and Resources Evaluator Statement**

The Prospective Resources estimates in this document are based on, and fairly represent, information and supporting documents prepared on 15 November 2023 by, or under the supervision of Walter Ziza, who is employed fulltime by Conrad Asia Energy Limited as Exploration Manager. He holds a MS in Geology, has been practicing as a Petroleum Geoscientist for 30 years. He is a member of the American Association of Petroleum Geologists (AAPG). Mr. Ziza is qualified in accordance with ASX listing rule 5.41 and has consented in writing to the inclusion of the information in the form and context in which it appears.

#### **Forward Looking Statements**

This document has been prepared by Conrad Asia Energy Ltd (the Company). This report contains certain statements which may constitute "forward-looking statements". It is believed that the expectations reflected in these statements are reasonable but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially, including, but not limited to: price fluctuations, actual demand, currency fluctuations, drilling and production results, reserve and resource estimates, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory developments, economic and financial market conditions in various countries and regions, political risks, project delays or advancements, approvals and cost estimates. The operations and activities are subject to joint venture, regulatory and other approvals and their timing and order may also be affected by weather, availability of equipment and materials and land access arrangements. Although Conrad believes that the expectations raised in this report are reasonable there can be no certainty that the events or operations described in this report will occur in the timeframe or order presented or at all.



There are numerous uncertainties inherent in estimating reserves and resources, and in projecting future production, development expenditures, operating expenses and cash flows. Oil and gas reserve engineering and resource assessment must be recognised as a subjective process of estimating subsurface accumulations of oil and gas that cannot be measured in an exact way.

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