



### 2014 WORK PROGRAM — DELIVERING PIPELINE PRODUCTION

## **Operational Update**

- ▶ Drilling program 14 well exploration program completed for CRR submissions, and twelve additional production wells drilled to date in 2014
- ▶ Well testing program 25 single zones frac tested in 2014
- ▶ Good progress continues to be made on the pilot production program, with a significant amount of the infield gathering pipeline construction now completed

Steady progress continues to be made towards Sino Gas & Energy Holdings Limited's (ASX:SEH, "Sino Gas", "the Company") key objectives of driving towards project approvals, improving single well productivity, and maximizing production.

Exploration success continues following the flow testing of a lower zone in TB-26. Additional drilling is underway in the north/western portion of the block to further appraise this area. One well was spudded and completed in August, with initial electric wireline results identifying 18.6 metres of net pay, and another was spudded in early September. Engineering planning is underway to create a pilot zone, with a final decision to be made once testing of these wells has been completed later in 2014.

During August, the lateral section of the second horizontal well was completed. Mud logs from the lateral section show that approximately 860 metres of pay was penetrated in the target formation, which is similar to that achieved in the first horizontal well. Preparations are underway to commence fraccing and testing, with results expected in October.

#### **HIGHLIGHTS**

- ► Encouraging drilling and testing results continue to be recorded on wells planned to be tied into pilot production program
- ► Major equipment delivered to Linxing Central Gathering Station and good progress made on infield gathering pipelines
- ► Second horizontal well completes drilling of lateral section and intercepts 860 metres of pay, with preparations underway for testing in September
- ► Financial close of US\$50 million facility agreement with Macquarie
- ► Board and management changes complete

# **Pilot Program Update**

Encouraging results continue to be received from the pilot production drilling program, with wireline log results of three of the five wells completed during the month, identifying an encouraging amount of net pay of between 25 to 28.2 metres (average 26.8 metres). Furthermore, six wells recorded commercial rates of between 150-840 thousand standard cubic feet/day (Mscf/day) at an average of 440 Mscf/day from single zone tests.

The optimization of fraccing techniques this year has seen a significant improvement in flow rates being recorded (including the first horizontal well). As a result of these improved rates, the number of wells planned to be drilled in 2014 is expected to be reduced. This will allow the Operations team to focus on connecting existing wells into the pilot program, as the majority of the wells scheduled to be hooked up in 2014 have already been drilled. Once these wells have been successfully connected and gas flow established, the pilot production program is expected to be expanded through the connection of additional existing wells and those planned to be drilled in early 2015. In parallel encouraging progress is being made on completing additional gas sales agreements.

Delivery of equipment to the Qiaojiashan central gathering station on Sanjiaobei and construction of the third party spur pipeline have been completed. Construction of 1/3 of the infield gathering pipelines to the central gathering station has also been completed.

Site preparations have been completed on the Linxing Central Gathering Station and major components have been transferred to site. Construction of the infield gathering pipelines is well underway, with 5km of 12km now completed.



## **Corporate Update**

In August, the Company executed facility documentation with Macquarie Bank Limited (Macquarie) for a structured term debt facility of up to US\$50 million. In early September, the Company drew down the first US\$10 million of the facility. Refer to ASX announcement on 29 August 2014 for the key terms finalised on the facility.

On 29 August 2014, Non-Executive Director Philip Bainbridge was appointed to the role of Chairman and former Chairman, Gavin Harper, transitioned to a Non-Executive Director role, as announced on 16 July 2014. This completes the recent changes to the board and management team, which has also included the addition of a Chief Executive Officer, Glenn Corrie and Chief Operations Officer, Frank Fu.

## **PSC Work Program Update**

### Linxing (West) - Sino Gas 31.7% Shanxi Province, People's Republic of China

Interpretation of 285km of seismic lines has been completed and data will be provided to RISC for inclusion in the 2014 year-end independent reserves and resources assessment.

Exploration drilling to fulfil the drilling requirements for Chinese Reserve Report has been completed and preparations for submission are advancing. Following the successful testing at TB-26, an additional appraisal well was spudded and reached total depth in August, and another was spudded early September. Furthermore, five production wells were completed in August, bringing to the total completed in 2014 to 12. Electric wirelines results of three of the five wells completed during the month, identified an encouraging amount of net pay of between 25 to 28.2 metres (average 26.8 metres), with another two identifying 11.8 and 2 metres. The second horizontal well completed drilling of the lateral section in August, and preparations are underway for testing scheduled to commence in September.

Testing of the lower level zone at TB-22 (approximately 3 km north/east from TB-26) produced at a nominal rate, and will be used to contribute to more prolific higher level zones in a production scenario. Testing at TB-12 of a higher level zone produced at a rate of 840 thousand standard cubic feet (Mscf)/day (calculated at a standard field pressure of 200psi) and is planned to be connected into the pilot pipeline production program.

### Linxing PSC (East) - Sino Gas 31.7% Shanxi Province, People's Republic of China

The second exploration well LXDG-02 was completed in July, and is scheduled to be frac tested once the drilling rig has been demobilised. Further exploration seismic and exploration drilling is currently being considered to be accelerated into 2014, with the aim of gaining a greater understanding of the significant underexplored deeper resource potential within Linxing (East).

## Sanjiaobei PSC - Sino Gas 24% Shanxi Province, People's Republic of China

Exploration wells required for Chinese Reserve Report submission have been completed. A selection process for additional pilot well locations is continuing for the north/west portion of the block, with rigs expected to be mobilized in Q4 to commence drilling.

Six wells were fracced during July and were flow tested into August. Five of the wells tested demonstrated commercial flow rates from single zone tests, while state pressure measure testing continues on the sixth. These testing results will be incorporated in to the Chinese Reserve Report submission. An additional well was fracced in August and has commenced flow testing.



### **ABOUT SINO GAS & ENERGY HOLDINGS LIMITED**

Sino Gas & Energy Holdings Limited ("Sino Gas" ASX: SEH) is an Australian energy company focused on developing Chinese unconventional gas assets. Sino Gas holds a 49% interest in Sino Gas & Energy Limited ("SGE") through a strategic partnership completed with MIE Holdings Corporation ("MIE" SEHK: 1555) in July 2012. SGE has been established in Beijing since 2006 and is the operator of the Linxing and Sanjiaobei Production Sharing Contracts (PSCs) in the Ordos Basin, Shanxi province.

SGE's interest in the Linxing PSC with CUCBM is 64.75% and 49% for the Sanjiaobei PSC held with PCCBM. SGE has a 100% working interest during the exploration phase of the PSC, with SGE's PSC partners being entitled to backin upon Overall Development Plan (ODP) approval, by contributing development and operating costs in line with their PSC interest.

The PSCs are located in the Ordos Basin and cover an area of approximately 3,000km<sup>2</sup>. The Ordos Basin is the second largest onshore oil and gas producing basin in China. The region has mature field developments with an established pipeline infrastructure to major markets. Rapid economic development is being experienced in the provinces in which Sino Gas' PSCs are located and natural gas is seen as a key component of clean energy supply in China.

Sino Gas & Energy Holdings Limited (ASX: SEH) was admitted to the Official List of ASX in 2009.



### Sino Gas & Energy Holdings Limited

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Our latest announcements and presentations can be found on our website: <a href="https://www.sinogasenergy.com">www.sinogasenergy.com</a>



#### SINO GAS' RESERVES & RESOURCES

Sino Gas' Attributable Net Reserves & Resources are summarised below:

Sino Gas' Attributable Net Reserves & Resources	1P RESERVES (Bcf)	2P RESERVES (Bcf)	3P RESERVES (Bcf)	2C CONTINGENT RESOURCES* (Bcf)	P50 PROSPECTIVE RESOURCES* (Bcf)	EMV₁₀ (US\$m)
31 December 2013 (Announced 4 March 2014)	129	291	480	850	1,023	2,258
31 December 2012 (Announced 20 March 2013)	32	94	199	653	885	1,556
CHANGE (+/-)%	+211% (2P Reserves)			+30%	+16%	+45%
Total Project 31 December 2013	466	1,068	1,786	2,941	3,978	N/A

<sup>\*</sup>Note: Contingent and Prospective Resources have not been risked for the risk of development and discovery. The estimated quantities of petroleum may potentially be recovered by the application of future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration and appraisal is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

Sino Gas' share of the project's success case Net Present Value ("NPV") and risk weighted EMV are summarised below:

SINO GAS' ATTRIBUTABLE	NPV <sub>10</sub> (US\$m)	EMV <sub>10</sub> (US\$m)
Reserves	625	653
Contingent Resources	828	754
Prospective Resources	1,350	851
TOTAL		2,258

#### **RESOURCES STATEMENT & DISCLAIMER**

The statements of resources in this release have been independently determined to Society of Petroleum Engineers (SPE) Petroleum Resource Management Systems (PRMS) standards by internationally recognized oil and gas consultants RISC (Announced 4 March 2014) using probabilistic estimation methods. These statements were not prepared to comply with the China Petroleum Reserves Office (PRO-2005) standards or the U.S. Securities and Exchange Commission regulations and have not been verified by SGE's PSC partners CNPC and CUCBM. EMV is the probability weighted net present value (NPV), including the range of project NPVs and the risk of the project not progressing. Project NPV<sub>10</sub> is based on a mid-case wellhead gas price of \$US8.79/Mscf and lifting costs (opex+capex) of ~US\$1.5/Mscf for mid-case Reserves, Contingent & Prospective Resources. All resource figures quoted are unrisked mid-case unless otherwise noted. Sino Gas' attributable net Reserves & Resources assumes PSC partner back-in upon ODP approval, CBM Energy's option to acquire an interest of 5.25% in the Linxing PSC (by paying 7.5% of back costs) is exercised, and MIE fulfil funding obligations under the strategic partnership agreement. Reserves & Resources are net of 4% in-field fuel for field compression and field operations. Reference point is defined to be at the field gate. No material changes have occurred in the assumptions and subsequent work program exploration and appraisal results have been in line with expectations.

Certain statements included in this release constitute forward looking information. This information is based upon a number of estimates and assumptions made on a reasonable basis by the Company in light of its experience, current conditions and expectations of future developments, as well as other factors that the Company believes are appropriate in the circumstances. While these estimates and assumptions are considered reasonable, they are inherently subject to business, economic, competitive, political and social uncertainties and contingencies.

Many factors could cause the Company's actual results to differ materially from those expressed or implied in any forward-looking information provided by the Company, or on behalf of, the Company. Such factors include, among other things, risks relating to additional funding requirements, gas prices, exploration, acquisition, development and operating risks, competition, production risks, regulatory restrictions, including environmental regulation and liability and potential title disputes. Forward-looking information is no guarantee of future performance and, accordingly, investors are cautioned not to put undue reliance on forward-looking information due to the inherent uncertainty therein. Forward-looking information is made as at the date of this release and the Company disclaims any intent or obligation to update publicly such forward-looking information, whether as a result of new information, future events or results or otherwise.

#### **COMPETENT PERSONS STATEMENT**

Information on the Resources in this release is based on an independent evaluation conducted by RISC Operations Pty Ltd (RISC), a leading independent petroleum advisory firm. The evaluation was carried out by RISC under the supervision of Mr Peter Stephenson, RISC Partner, in accordance with the SPE-PRMS guidelines. Mr Stephenson has a M.Eng in Petroleum Engineering and 30 years of experience in the oil and gas industry. RISC consents to the inclusion of this information in this release.