



### 2014 WORK PROGRAM — DELIVERING PIPELINE PRODUCTION

# **Pilot Program Update**

- ► Central gas station on Sanjiaobei prepares for commissioning, with 16 wells tied into the pilot production program
- > Strong initial well test results being recorded from pilot wells ahead of first gas
- Gas sales arrangements are now being concluded in preparation for first gas

The connection of equipment on the Qiaojiashan pilot program central gathering station has been completed and by mid-November preparations were underway for commissioning of the facility. The construction of the pilot infield gathering pipelines and air displacement has been completed. The sixteen wells initially planned to be incorporated into the pilot program have been connected from both blocks. Meanwhile, good progress continues to be made on finalizing gas sales arrangements.

Encouraging testing results have been received during October from the wells that will be tied into the pilot production program. A number of the development wells have flowed at rates of between 0.7-1.0 million standard cubic feet (MMscf) per day, representing some of the highest rates that have been recorded from vertical wells on the block to date. At time of writing, further positive testing results were received from LXW5-5, with a gas rate of 1.3 MMscf per day (well head pressure of 783psi) being recorded.

Work continues on the Linxing central gathering station on facilities installation and connection. Construction of the infield gathering lines is underway, including connection of the first horizontal well. The gas buyer has started construction on the 32" 100MMscf/d capacity spurline that will tie into the regional gas export system. The Linxing central gathering station is scheduled to be commissioned mid-2015, at which stage all Linxing wells are planned be connected through the Linxing central gathering station, allowing the ramp-up of production to continue on both blocks.

# **Operational Update**

- Chinese Reserve Reports for Linxing (West) and Sanjiaobei being finalised for PSC partner review
- ► Exploration program LXDG-03 encounters significant amount of net pay on Linxing (East)

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.

Following the approval of the first Chinese Reserve Report on Linxing (East) earlier in the year, compilation of the seismic, drilling and testing data for the initial reports on the south of Linxing (West) and Sanjiaobei has been completed. These reports are being prepared for submission to the PSC partner for review prior to the formal submission to MOLAR.

Exploration success continues with the discovery of 86.6 metres of net pay in LXDG-03, which was drilled in the south/west portion of Linxing (East). The logs identified a particularly prospective middle level pay zone, where a 13 metre section of good quality gas bearing sands was intersected. The results of the two deep exploration wells drilled during 2014 on Linxing (East) will be used in the forthcoming updated reserve and resource assessment scheduled to be concluded in Q1 2015. These results dramatically improve the prospectivity of the southern area of the Linxing East block and testing as well as further drilling is planned during 2015 to further explore and appraise the deeper resource potential in Linxing (East).

Following the successful drilling and testing of TB-26 (announced 19 June 2014), which flowed at a measured rate of 1.2 million standard cubic feet (MMscf) per day from an unfracced lower zone, encouraging drilling results were received from the third well drilled within its vicinity on the north/west portion of Linxing (West). Initial electric wireline logs from TB-26-3 identified 33.2 metres of gas bearing sands, approximately 2km from TB-26, confirming the lateral extent of this prolific region in the Linxing (West) block. Meanwhile, further drilling is almost underway in the vicinity of TB-23, which flowed at a measured rate of over 2 MMscf/day from a middle level zone (announced 6 August 2014). Engineering planning is continuing to connect wells in the area into the pilot production program.



# **Corporate Update**

During October, the Company contributed \$6.1 (\$10.7 YTD) million dollars for cash calls relating to the qualifying expenditure of the PSCs. In addition, the Company contributed \$19,600 (US\$592,000 year to date) to non-qualifying expenditure for the head office general and administration costs of Sino Gas & Energy Limited (SGE).

The Company ran a field trip for analysts and investors mid-November. The participants toured drilling and production facilities and met with the Operations team as well as local government officials and one of the provincial gas buyers. The trip comes after increased engagement with the Australian and Asia investment community.

### 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 updated reserves and resources assessment. Exploration drilling to fulfil the Chinese Reserve Report requirements has been completed for the outstanding northern portion of Linxing (West) and preparations for submission for PSC partner review are moving toward completion.

Testing of the second horizontal well was completed in October (announced 27 October 2014), with a seven-stage frac job being conducted in a 7.8 metre vertical pay zone. The test achieved a sustained flow rate of 3.7 MMscf/day at a relatively stable flowing tubing head pressure of 1,494psi. This rate was surface constrained and based on the expected field operating conditions at 200psi, the well is estimated to be able to deliver a production rate of over 5.1 MMscf/day. The well will be shut-in and suspended as a future producer.

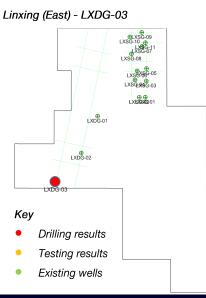
Positive results from well tests conducted in the prospective area to the north of the block continue to be received, with testing at TB-19 (approximately 4 km north/east from TB-2H) producing a measured flow rate of 520 thousand standard cubic feet (Mscf) per day from two comingled middle-lower and lower zones. Testing at TB-24 flowed at a nominal rate from a middle-lower zone in the central discovered area, and has the potential to contribute to the more prolific higher level zones in a production scenario.

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

The third vertical deep exploration well LXDG-03 on Linxing (East) has completed drilling, with initial electric wireline logs identifying 86.6 metres of net pay. Acquisition for 450km of 2D seismic brought forward from the 2015 work program has now commenced. This is being conducted with the aim of completing processing and interpretation prior to spring 2015 when the drilling window re-opens. Testing of LXDG-03 along with the drilling of additional exploration wells is scheduled for early 2015 to further define the deeper resource potential on Linxing (East). Preparation for the Overall Development Plan is continuing, following the approval of the Chinese Reserve Report by the Ministry of Land & Resources (MOLAR).

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

The predrilling engineering operations for two proposed wells are underway on the western portion of the block. Rig mobilization will commence once the site is prepared. The Chinese Reserve Report compilation has been completed inline with reserve specifications, and is being prepared for Chinese partner review.







Preparations underway for commissioning of the Sanjiaobei central gathering station



Installation and connection of compressors on the Linxing central gathering station



Installation and connection of separators on the Linxing central gathering station



#### **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

Glenn Corrie CEO +86 10 8458 3001 1300 746 642 (local call within Australia) gcorrie@sinogasenergy.com





#### 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.