



## 2013 WORK PROGRAM — EXECUTING THE PLAN

#### Operational Update

- ▶ Drilling program 21 wells completed drilling, while an additional two approach total depth
- ▶ Well testing program Testing on13 of 24 wells in progress
- First CRR submission on Linxing PSC completed and 3 year exploration extension agreed
- First horizontal well for Sino Gas spud in mid-August

As steady progress continued to be made in the work programs, two major milestones were achieved on the Linxing Production Sharing Contract (PSC). The PSC operator, Sino Gas & Energy Limited (SGE), submitted its first Chinese Reserve Report (CRR) and also agreed a three year extension to the exploration period with China United Coalbed Methane (CUCBM).

After being compiled by the CUCBM Research Centre, the CRR has been submitted to be formally ratified by both PSC partners at the next Joint Management Committee meeting, expected to be held in early Q4 2013. CUCBM will then provide the report to the Chinese Ministry of Land & Resources (MOLAR) for approval.

As anticipated, SGE signed a tenth modification agreement with Linxing PSC Partner CUCBM, which extends the exploration period of the Linxing Production Sharing Contract to August 2016 with no relinquishment of acreage or change to the PSC allocation structure.

Sino Gas' Managing Director and CEO, Robert Bearden said "Preparing a CRR is the first step in a two-step regulatory process to develop gas assets into producing fields in China. After receiving CRR approval from MOLAR, we can then focus on preparing the Overall Development Plan (ODP) for full field development. Meanwhile, the exploration extension paves the way for the aggressive work programs allowing Sino Gas to fully appraise of the resource potential within the block to continue."

The first horizontal well was spud on Linxing (West) in mid-August and is drilling to a total depth of approximately 2,000 metres, and will include a 1,000 metre lateral section. Drilling of the well is expected to be finished in October, at which point a multi-stage completion including fraccing is planned. The well is also scheduled to be tested before year-end and is expected to produce into the pilot production facilities next year. An additional horizontal well initially planned on Sanjiaobei has been postponed to 2014, to allow a cost benefit analysis to be completed prior to spudding.

In the central region of Linxing (West), TB-14 is approaching total depth and on Sanjiaobei one well completed drilling in August, while another well is approaching total depth. Before year end, four additional wells are planned to be drilled on Linxing (West), along with an exploration well LXDG-02 on Linxing (East) and the two remaining wells on Sanjiaobei.

The testing program has been expanded to include an additional three wells and further confidence has been gained over the preliminary results reported in July. One well has been tested for 31 days, producing at a stabilised rate of 880,000 standard cubic feet a day (scf/day), while another well has flowed at increasing flow rates of up to 390,000 scf/day over a five day period while frac fluid extraction continues. Both of these tests have been from the mid-depth payzones and from single fracced zones.

## **HIGHLIGHTS**

- ▶ 2013 work program on-track with 21 wells now completed as an additional two approach total depth.
- ► Well Testing—Testing of thirteen zones is underway.
- ► Linxing (West) First horizontal well spud in August.
- ▶ Linxing (East) Following completion of drilling at LXDG-01 (which identified multiple gas zones on the western portion), preparations are continuing to spud LXDG-02 in September.
- ► Sanjiaobei One well completed drilling in August, another approaching total depth and final two wells of the Sanjiaobei 2013 drilling program expected to commence in September.
- ▶ RISC is continuing the interpretation of 1,235km of seismic lines and drilling results from 20 wells for the Q3 reserves and resources assessment. Results are expected to be announced early Q4 2013.

Four other wells have flowed from deeper zones at rates exceeding 100,000 scf/day for over 30 days. This is particularly encouraging as these deeper zones usually flow at lesser rates than the upper zones and will be co-produced with the more prolific upper zones once in production. Over the coming months testing will focus on the middle and upper payzones to provide a complete reservoir characterisation of overall well productivity.



#### **PSC WORK PROGRAM UPDATE**

## Linxing (West) - Sino Gas 31.7%

## Seismic

Processing and interpretation of the 650km of seismic lines acquired on Linxing during the second quarter was fast-tracked and is being reviewed by RISC for inclusion in the updated Q3 Reserves and Resources assessment. The aim of the program is to enable further resource assessment on Linxing (West) and support the drilling and flow testing results required for a separate Chinese Reserve Report (CRR).

## Drilling

Drilling at the centrally located TB-14 commenced early August and by month end was approaching total depth. Preparations are also underway to commence drilling Sino Gas' first horizontal well in August. The first horizontal well was spud mid-August and commenced drilling to a total depth of approximately 2,000 metres. Drilling of the well is expected to be finished in October, at which point a multi-stage completion including fraccing is planned.

## **Testing**

Following planning for the batch flow testing program on Linxing (West), testing teams arrived on site enabling the continuous testing of drilled wells from the 2012 and 2013 work programs to commence. The first well of the program, TB-11, was perforated and fracced in July.

# Linxing (East) - Sino Gas 31.7%

#### Seismic

The potential for further seismic work on Linxing (East) will be determined following the analysis of a combination of drilling results from the exploration wells planned for mid-2013 and previous seismic analysis.

## Drilling

Following the completion of drilling at LXDG-01, where initial mud and wireline logs identified 33.1 metres of pay across 8 pay intervals, a rig is now being mobilised to LXDG-02. Final safety checks are being performed on a newly constructed cement road to allow access to the site are being performed and drilling is expected to commence in September.

#### Testing

The dewatering program continued on six wells and gas to surface has been achieved on the five of the wells to date. Dewatering continued to obtain flow rate data for Chinese Reserve Reporting (CRR) purposes which was submitted at the end of August. Sufficient data was gathered from these six wells to enable CRR submission, and additional wells will commence dewatering prior to the installation of production facilities. Meanwhile, testing operations have commenced on the first of the exploration wells to the west of the acreage at LXDG-01.

# Sanjiaobei - Sino Gas 24%

#### Seismic

Processing and interpretation of the 585km of seismic lines acquired on Sanjiaobei during the second quarter was fast-tracked and is being reviewed by RISC for inclusion in the updated Q3 reserves and resources assessment. Seismic acquired on the eastern portion of the block will be used in conjunction with recent exploration drilling to further define the previously underexplored potential.

#### Drillina

Steady drilling activity continued on Sanjiaobei during August, with one well SJB20 being completed and SJB22 drilling to total depth. Electronic wireline logs will be conducted on SJB20 to determine net pay discovered during drilling. Two additional wells at SJB9 and SJB27 are planned to commence drilling in September.

#### Testina

Up to the end of August, the first eleven wells of the testing program had been fracced and initial testing completed on three wells. Following fraccing, frac fluid extraction and shut-in procedures are being performed with the aim of achieving stable flow rates for Chinese Reserve Reporting and reservoirs information purposes. Multiple zones in each well are planned to be tested to determine well productivity.



## <sup>1</sup>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 back-in 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.



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## SINO GAS' RESERVES & RESOURCES

#### Project 100% Reserves & Resources are summarised below:

PROJECT (100%) RESERVES & RESOURCES (BCF)	BEST ESTIMATE GAS IN PLACE (GIP)	1P RESERVES	2P RESERVES	3P RESERVES	2C MID CASE CONTINGENT RESOURCES	P50 MID-CASE PROSPECTIVE
LINXING PSC	12,343	66	193	412	1,569	2,129
SANJIAOBEI PSC	5,684	46	134	287	654	1,047
TOTAL 2013	18,027	112	327	699	2,223	3,176
TOTAL 2012	11,931	7	22	47	1,799	1,861
CHANGE	+51%		+1386% (2P)		+24%	+71%

#### The Company's attributable net Reserves & Resources and Economic Evaluations are summarised below:

SINO GAS' ATTRIBUTABLE NET RESERVES & RESOURCES (BCF)	1P RESERVES	2P RESERVES	3P RESERVES	2C MID-CASE CONTINGENT RESOURCES	P50 MID-CASE PROSPECTIVE	NPV₁₀ MID-CASE (US\$M)	EMV (US\$M)
2013							
LINXING PSC	21	61	130	494	638	1,307	1,078
SANJIAOBEI PSC	11	33	69	159	247	556	478
TOTAL	32	94	199	653	885	1,863	1,556

## **RESOURCES STATEMENT & DISCLAIMER**

The statements of resources in this Release have been independently determined to Society of Petroleum Engineers (SPE). Petroleum Resource Management Systems (SPE PRMS) standards by internationally recognized oil and gas consultants RISC (March 2013). 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. Project NPV<sub>10</sub> is based on a mid-case gas price of \$US 8.54/mscf, lifting costs (opex+capex) ~ US\$1.3/ msf mid-case. 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. strategic partnership agreement.

Certain statements included in this announcement constitute forward looking information. This information is based upon a number of estimates and assumptions made 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 to the inherent uncertainty therein. Forward-looking information is made as the date of this announcement 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 SPEPRMS guidelines. Mr Stephenson has a M.Eng in Petroleum Engineering and 30 years of experience in the oil and gas industry. RISC consent to the inclusion of this information in this

#### **ABOUT RISC**

RISC is an independent advisory firm that evaluates resources and projects in the oil and gas industry. RISC offers the highest level of technical, commercial and strategic advice to clients around the world. RISC services include the preparation of independent reports for listed companies in accordance with regulatory requirements. RISC is independent with respect to Sino Gas in accordance with the Valmin Code, ASX listing rules and ASIC requirements.