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ASX RELEASE

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# **Operational Update – Reid's Dome Project**

## Highlights:

- Nyanda-4 well producing gas after two weeks on test at 156 mscf/day and building, with minimal water make.
- Serocold-1 reached the planned total depth of 1200m on 13 December 2019.
- Quick-look estimate of Serocold-1 logs indicate 27m net coals in the well from 51 seams of between 0.3 and 4.5m thickness.
- Permeability testing has indicated promising permeability in a significant number of the seams.
- Essential data is being acquired for the Company's **Target 2021** Gas-to-Market strategy.

**State Gas Limited** (**ASX: GAS**) ("State Gas" or "the Company") is pleased to provide a further update and a summary of results to date of recent field activities at its Reid's Dome Gas Project (PL 231).

#### Nyanda-4

The Nyanda-4 well which was drilled by State Gas in late 2018 is producing gas at a rate of 156 mscf/day after 13 days dewatering.

State Gas is very encouraged by the early production at Nyanda-4 as it has demonstrated that the coals at Reid's Dome may commence gas production very early, with only minor water production.

Nyanda-4 was the first coal seam gas (CSG) well within the Reid's Dome project and established the potential for a CSG project in PL 231. Located in the southern region of the permit, the well intersected 40m net coal and a further 25m of carbonaceous shales<sup>1</sup>, as well as a number of conventional tight gas sands. The average gas content measured by desorption of the coal cores acquired from the well was 13.75 m<sup>3</sup>/t.<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> Announcement 21 January 2019

<sup>&</sup>lt;sup>2</sup> Announcement 4 November 2019

The well was completed for production testing in a workover conducted in November 2019<sup>3</sup>, and the production test commenced on 4 December 2019<sup>4</sup>.

Early results of the production test have been very encouraging. It had been anticipated that several weeks of dewatering would be required to lower the down hole pressure to a level sufficient to enable gas flow. However sustained gas production from the well commenced on 9 December, after only 5 days. As at 6am on 16 December gas was being produced at the rate of 156 mscf/day, and continues to build. A sample of the produced gas has been obtained and is currently undergoing analysis to determine composition.

Fluid level is still 100m above the first permeable coal. In addition, water production from the well has been minimal with an estimated 6,000 litres produced since commencement. This low water rate suggests the water management task for this project will be at the lowest end of the range for CSG projects.

Both the gas flow and low water make are highly encouraging indicators for a commercial project.

State Gas plans to continue to operate the test for several months to provide further data on production flow rates.

#### Serocold-1

The Serocold-1 well is located in the centre of PL 231, approximately 6 kilometres north of the Nyanda-4 well (refer *Figure-1*), to provide important information about the extent of coals and gas throughout the Reid's Dome Gas Project.

As announced on 9 December 2019, Serocold-1 was spudded on 6 December. It reached its planned total depth of 1200m on 13 December, following which it has been logged and permeability tested.

Wireline logs have indicated 27m net coal between the depths of 515 m and 1185m in seams of up to 4.5 m thick. The well also contains two gas sands of ~3m thick each in the Reid's Dome Beds.

Permeability testing was undertaken of 13 seams and one gas sand. A significant number of the seams has shown promising permeability, more than justifying a production test of the well.

A drill stem test of the Cattle Creek Formation during drilling recovered water. The test provides pressure data which constrains the likely down-dip extent of the intra Cattle Creek gas sand discovered in Aldinga East-1A, and indicates a potential gas column height of about 100m.

The most promising coal seams in the Serocold-1 well are currently being under-reamed. Production casing will then be inserted and the well suspended, enabling the Silver City Drilling rig to be demobilised. TDC's Rig 4 will mobilise to the well in the New Year to complete it for production testing, with the test expected to commence in mid to late January. The Company expects to conduct the test for between 3 to 6 months to obtain sustained gas flow data from the well.

<sup>&</sup>lt;sup>3</sup> Announcement 27 November 2019

<sup>&</sup>lt;sup>4</sup> Announcement 9 December 2019

# Aldinga East-1A

The Aldinga East-1A well is located approximately 6km further north of Serocold-1 in the northern area of PL231 (see *Figure 1*), with the three wells across the permit enabling a data suite to support analysis across the permit.

As previously announced<sup>5</sup>, the Aldinga East-1A well discovered a new conventional gas pool with approximately 9m net sand in the Cattle Creek Formation. Pressure testing confirmed the presence of gas in the sand. A gas sample taken from the well was analysed by an independent laboratory as containing 97.88% methane (i.e. pipeline quality gas).

The likely size and volume of the new pool in the Cattle Creek Gas Sand is currently under evaluation.

Aldinga East-1A was drilled to a total depth of 884m, with 86m of core samples taken. Gas was noted bubbling from the coal core samples prior to their placement into the desorption canisters. The coal samples are currently undergoing desorption testing in the ALS laboratory with data from that analysis expected over the coming months.

Logging identified between 10m and 14m of net coal in the well and a further 9m of conventional sands (in addition to the gas sand in the Cattle Creek Formation) in the Reid's Dome Beds. More precise estimates of coal seams will become available following correlation of logging with core samples taken from the well, to be undertaken over the coming weeks. The best permeabilities in the well occur between 592m and 753m.

#### Target 2021 Gas-to-Market Strategy

State Gas' Executive Chairman, Mr Richard Cottee expressed his pleasure at the results so far. "I am really very excited by the gas flows we are witnessing from the Nyanda-4 well. To have sustained and increasing gas production so early, and at these rates, is very promising for a commercial project at Reid's Dome. We had previously established the presence of gas in the permit, now we are proving it can be produced at what looks like good flow rates and with minimal water make."

"The results at Serocold-1 are also pleasing, with a substantial number of what looks like good coals and a promising gas sand. We anticipate the coals at Serocold-1 to commence gas production early with minor water production, similar to Nyanda-4. I am looking forward to getting this well on pump and watching its production. Let's see what the next few months brings with both Nyanda-4 and Serocold-1".

"These results are really encouraging for the Company's **Target 2021** Gas-to-Market strategy. We are obtaining good data which provides confidence that we can progress the Reid's Dome Project to commercial reality with our gas supplied into the market" Mr Cottee added.

A further update on results will be provided in the New Year.

<sup>&</sup>lt;sup>5</sup> 13 November and 9 December 2019

# ENDS

# FOR FURTHER INFORMATION

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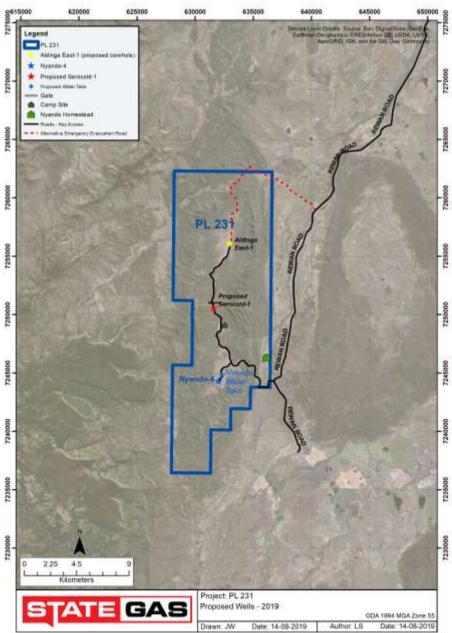


Fig 1: Location of Aldinga East-1A, Nyanda-4 and proposed Serocold-1 wells