# **ASX Announcement**



# Senex delivers major Surat Basin gas reserves upgrade following delivery of transformational gas developments

Senex Energy Ltd (Senex, ASX: SXY) today released its independently assessed<sup>1</sup> estimates of reserves and contingent resources as at 30 June 2020, reporting a 21% increase in Surat Basin 2P gas reserves to 739 PJ following outstanding execution of its Surat Basin natural gas developments.

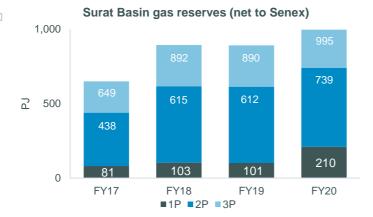
Excellent appraisal and development drilling results at Atlas have driven a 62% (90 PJ) increase in 2P gas reserves to 234 PJ, with continued Roma North production outperformance driving a 10% (25 PJ) increase in 2P gas reserves to 283 PJ. Other reserves estimate highlights include:

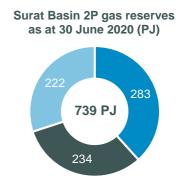
- Surat Basin 1P (proved) gas reserves up 109 PJ (108%) to 210 PJ
- Surat Basin 2P (proved and probable) gas reserves up 127 PJ (21%) to 739 PJ
- Surat Basin 3P (proved, probable and possible) gas reserves up 105 PJ (12%) to 995 PJ
- Cooper Basin 2P reserves replacement ratio of ~100% achieved; 2P reserves steady at 7.3 mmboe
- Total Senex 2P oil and gas reserves up 127 PJe (19%) to 781 PJe (134 mmboe) as at 30 June 2020

Senex Managing Director and CEO Ian Davies said Senex's major Surat Basin reserves upgrade follows the successful delivery of its transformational natural gas developments.

"FY20 was a year focused on successful execution of our \$400 million Surat Basin developments, which delivered outstanding project delivery performance, continued gas production outperformance, and now material upgrades in booked natural gas reserves.

"With gas processing infrastructure established and a growing reserves base, Senex has now successfully delivered on the foundations to achieve continued growth in production, earnings and cashflow from its valuable east coast Surat Basin natural gas position", Mr Davies said.





Roma North 
Atlas 
Other Western Surat

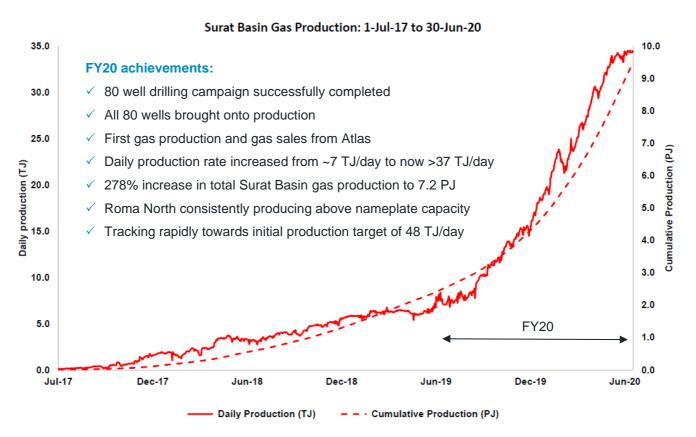
<sup>1</sup> Independently assessed by Netherland Sewell & Associates (NSAI) and DeGolyer and MacNaughton (D&M); refer Appendix B

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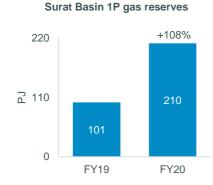
# Surat Basin

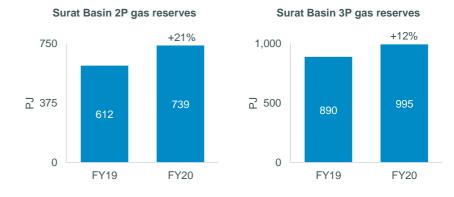
Surat Basin natural gas reserves upgrades have been driven by excellent appraisal and development drilling results at Atlas and continued Roma North production outperformance. Daily production has increased from ~7 TJ/day at the start of FY20 and now exceeds 37 TJ/day, tracking rapidly towards Senex's initial production target of 48 TJ/day.



Appraisal and development drilling and gas production performance in FY20 has underpinned major increases in booked gas reserves in the Surat Basin, including a 108% increase in 1P gas reserves to 210 PJ. 2P and 3P gas reserves are now estimated at 739 PJ and 995 PJ respectively.

Surat Basin 2P gas reserves of 739 PJ represent over 40 years of natural gas production at the initial target rate of 48 TJ/day, providing material opportunities for gas production acceleration and expansion.





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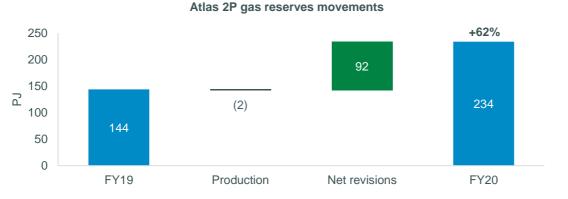
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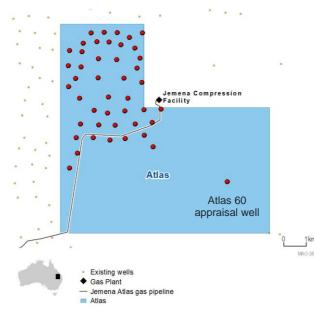
# Surat Basin – Atlas

Atlas recorded a 90 PJ (62%) increase in 2P gas reserves to 234 PJ, largely attributable to:

- Better than expected drilling results from the 45 well campaign, which indicated larger than originally assumed net coal intersections and gas in place estimates;
- Strong initial reservoir performance since production commenced in late December 2019, which confirmed increased estimates of coal permeability; and
- Successful appraisal drilling in the southeast of Atlas (Atlas 60), which indicated high permeability consistent with current production in the north-west of the block.



Atlas Original Gas in Place (OGIP) gas been estimated at 435 PJ (previously 427 PJ). Successful testing of wells in the FY20 drilling campaign, including appraisal well Atlas 60, has substantially improved the outlook on recoverability, with the Atlas 2P gas reserves recovery estimate increasing to 54% (previously 46%). Atlas 2P gas reserves of 234 PJ represents over 20 years of natural gas production at the initial target rate of 32 TJ/day.



#### Atlas acreage and FY20 drilling campaign

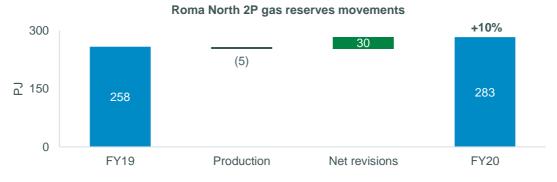
### Atlas drilling campaign highlights:

- ✓ 45 well drilling campaign completed in FY20
- Wells reduced to 45 (from 60) due to strong initial production performance
- All wells brought on production in FY20
- ✓ Completed below budget and ahead of schedule
- ✓ Industry leading spud-to-spud cycle times achieved
- Delivery of first gas in record time for a coal seam gas project in Queensland
- Atlas 60 appraisal well confirmed high permeability

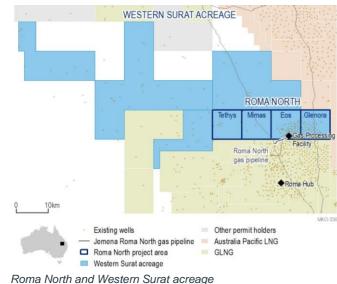
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# Surat Basin – Roma North

Roma North recorded a 25 PJ (10%) increase in 2P gas reserves to 283 PJ following continued strong production and reservoir performance. Performance of the gas processing facility has been excellent, with facility uptime above expectations, and throughput debottlenecked to 18 TJ/day (from 16 TJ/day).



Roma North 2P gas reserves of 283 PJ represents almost 50 years of natural gas production at an initial rate of 16 TJ/day, and over 30 years following expansion of the gas processing facility to 24 TJ/day.

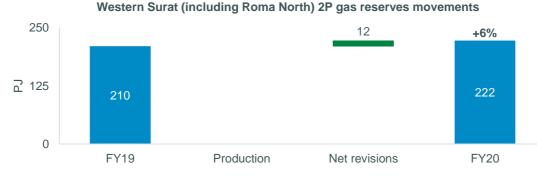


# Roma North drilling campaign highlights:

- ✓ 35 well drilling campaign completed in FY20
- Wells reduced to 35 (from 50) due to strong production and reservoir performance
- All wells brought on production in FY20
- Completed below budget and ahead of schedule
- Industry leading spud-to-spud cycle times achieved
- Reached initial nameplate production capacity of 16 TJ/day more than 12 months ahead of schedule
- ✓ Facility de-bottlenecking achieved to >18 TJ/day

# Surat Basin – Western Surat

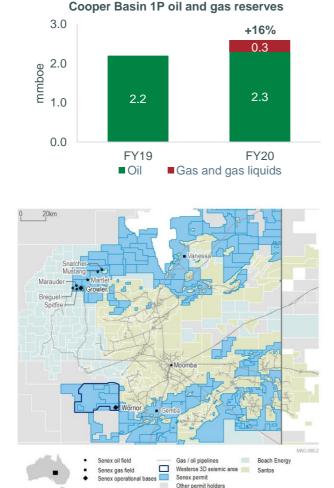
Material running room for further appraisal and development activity remains in the broader Western Surat acreage beyond Roma North, with a further 222 PJ of 2P reserves booked, up from 210 PJ.

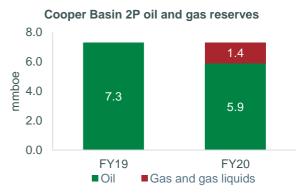


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# **Cooper Basin**

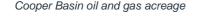
In the Cooper Basin, a 2P reserves replacement ratio of ~100% was achieved following strong reservoir performance from the Gemba gas field and continued strong production performance at the Growler and Snatcher oil fields, partially offset by a downward revision at the Snatcher North oil field following the unsuccessful delineation of a potential northern extension.





#### **Cooper Basin FY20 highlights:**

- Gemba gas discovery brought on production
- Continued strong production performance from the Growler oil field
- Western Flank oil prospectivity continues with material exploration targets to pursue
- Westeros 3D seismic survey completed with material exploration targets identified
- Free carry drilling campaign with Beach Energy successfully completed
- Growler Northeast horizontal development oil well with 2.9 km lateral section
- Waterflood secondary recovery drilling in the Snatcher oil field



#### Further information on reserves and resource bookings is contained in Appendices A and B.

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### **About Senex**

Senex is an ASX-listed, growing and independent Australian oil and gas company with a 30-year history. We manage a strategically positioned portfolio of onshore oil and gas assets in Queensland and South Australia, with access to Australia's east coast energy market. Senex is focused on creating sustainable value for shareholders by leveraging our capability as a low cost, efficient and safe explorer and producer.

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# APPENDIX A – NET RESERVES AND CONTINGENT RESOURCES

Senex engaged the services of Netherland Sewell & Associates (NSAI) and DeGolyer and MacNaughton (D&M) to independently assess reserves and resources prior to reporting any updated estimates. NSAI and D&M are independent resource estimating firms with considerable experience in the Surat Basin and the Cooper Basin, respectively.

Given Senex's transformation to a material east coast gas producer, the tables below summarising reserves and contingent resources are presented on the basis of both petajoules equivalent (PJe) and million barrels of oil equivalent (mmboe). Refer to Appendix B for calculation methods, factors, ratios and reference points.

	FY19	Production	Revisions	FY20	Change
1P reserves (PJe)	112.3	(12.1)	124.5	224.6	100%
2P reserves (PJe)	654.5	(12.1)	139.0	781.4	19%
3P reserves (PJe)	952.6	(12.1)	118.5	1,059.0	11%
2C resources (PJe)	48.3	-	9.6	58.0	20%
1P reserves (mmboe)	19.3	(2.1)	21.4	38.6	100%
2P reserves (mmboe)	112.6	(2.1)	23.9	134.4	19%
3P reserves (mmboe)	163.8	(2.1)	20.4	182.1	11%
2C resources (mmboe)	8.3	-	1.7	10.0	20%

Movements: Reserves and Contingent Resources (net to Senex)

Note: Reserves or contingent resources are not currently reported for the recently awarded Artemis domestic gas tenure; numbers presented may not add due to rounding; refer to Appendix B for calculation methods, factors, ratios and reference points

#### Movements: 2P Proved and Probable Reserves (net to Senex)

2P reserves	FY19	Production	Revisions	FY20	Change
Atlas (PJe)	143.8	2.1	91.9	233.6	62%
Roma North (PJe)	258.0	5.1	30.1	283.0	10%
Other Western Surat (PJe)	210.0	-	12.5	222.5	6%
Total Surat Basin (PJe)	611.8	7.2	134.5	739.1	21%
Total Cooper Basin (PJe)	42.7	4.9	4.5	42.3	(1%)
Total Senex (PJe)	654.5	12.1	139.0	781.4	19%
Atlas (mmboe)	24.7	0.4	15.8	40.2	62%
Roma North (mmboe)	44.4	0.9	5.2	48.7	10%
Other Western Surat (mmboe)	36.1	-	2.1	38.3	6%
Total Surat Basin (mmboe)	105.2	1.2	23.1	127.1	21%
Total Cooper Basin (mmboe)	7.3	0.8	0.8	7.3	(1%)
Total Senex (mmboe)	112.6	2.1	23.9	134.4	19%

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#### Summary: 1P Proved Reserves (net to Senex)

1P reserves	Oil	Gas & gas liquids	Total	Developed	Undeveloped	Total
Surat Basin (PJe)	-	209.8	209.8	115.7	94.1	209.8
Cooper Basin (PJe)	13.2	1.6	14.8	12.4	2.3	14.8
Total 1P reserves (PJe)	13.2	211.4	224.6	128.2	96.4	224.6
Surat Basin (mmboe)	-	36.1	36.1	19.9	16.2	36.1
Cooper Basin (mmboe)	2.3	0.3	2.5	2.1	0.4	2.5
Total 1P reserves (mmboe)	2.3	36.4	38.6	22.0	16.6	38.6

Proportion of total Proved Reserves that are unconventional (coal seam gas): 93%

#### Summary: 2P Proved and Probable Reserves (net to Senex)

2P reserves	Oil	Gas & gas liquids	Total	Developed	Undeveloped	Total
Surat Basin (PJe)	-	739.1	739.1	115.7	623.3	739.1
Cooper Basin (PJe)	34.3	8.0	42.3	22.5	19.8	42.3
Total 2P reserves (PJe)	34.3	747.0	781.4	138.2	643.1	781.4
Surat Basin (mmboe)	-	127.1	127.1	19.9	107.2	127.1
Cooper Basin (mmboe)	5.9	1.4	7.3	3.9	3.4	7.3
Total 2P reserves (mmboe)	5.9	128.5	134.4	23.8	110.6	134.4

Proportion of total Proved and Probable Reserves that are unconventional (coal seam gas): 95%

#### Summary: 3P Proved, Probable and Possible Reserves (net to Senex)

3P reserves	Oil	Gas & gas liquids	Total	Developed	Undeveloped	Total
Surat Basin (PJe)	-	994.9	994.9	115.7	879.2	994.9
Cooper Basin (PJe)	52.2	11.9	64.1	33.9	30.2	64.1
Total 3P reserves (PJe)	52.2	1,006.8	1,059.0	149.6	909.4	1,059.0
Surat Basin (mmboe)	-	171.1	171.1	19.9	151.2	171.1
Cooper Basin (mmboe)	9.0	2.0	11.0	5.8	5.2	11.0
Total 3P reserves (mmboe)	9.0	173.1	182.1	25.7	156.4	182.1

Proportion of total Proved, Probable and Possible Reserves that are unconventional (coal seam gas): 94%

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#### Summary: 2C Contingent Resources (net to Senex)

2C resources	Oil	Gas & gas liquids	Total
Surat Basin (PJe)	-	-	-
Cooper Basin (PJe)	34.6	23.3	58.0
Total 2C contingent resources (PJe)	34.6	23.3	58.0
Surat Basin (mmboe)	-	-	-
Cooper Basin (mmboe)	6.0	4.0	10.0
Total 2C contingent resources (mmboe)	6.0	4.0	10.0

Note: Reserves or contingent resources are not currently reported for the recently awarded Artemis domestic gas tenure

#### **APPENDIX B – NOTES TO THE ANNUAL RESERVES STATEMENT**

Senex prepares its petroleum reserves and contingent resources estimates in accordance with the Petroleum Resources Management System published by the Society of Petroleum Engineers (SPE PRMS 2018). Unless otherwise stated, all references to reserves and resources in this statement relate to Senex's economic interest in those reserves and resources. All estimates of petroleum reserves reported by Senex are prepared by, or under the supervision of, a qualified petroleum reserves and resources evaluator. To ensure the integrity and reliability of data used in the reserves estimation process, the raw data is reviewed and quality controlled by senior professional production, reservoir, petrophysical and geological staff at Senex. Access to the substantiated data is then restricted to authorised staff members. During each petroleum reserves review, this data is updated, analysed and checked against the previous year's data.

This reserves and resources statement is based on, and fairly represents, information and supporting documentation prepared by, or under the supervision of, a qualified petroleum reserves and resources evaluator, Mr Peter Mills BEng (Electronics). Mr Mills (Chief Operating Officer) is a member of the Society of Petroleum Engineers and a full-time employee of Senex and has approved this statement as a whole and has provided written consent to the form and context in which the estimated reserves, resources and supporting information are presented.

#### External assessment and evaluation date

Senex engaged the services of Netherland Sewell & Associates (NSAI) and DeGolyer and MacNaughton (D&M) to independently assess the data and assess reserves and resources prior to Senex reporting any updated estimates. D&M and NSAI are independent resource estimating firms with considerable experience in the Surat Basin and the Cooper Basin, respectively. Senex reviews and updates its oil and gas reserves position on an annual basis and reports the updated estimates as of 30 June each year.

#### Calculation methods, factors, ratios and reference points

Petroleum reserves and contingent resources are aggregated by arithmetic summation by category. The arithmetic method does not account for 'portfolio effects'. The deterministic method was used to prepare the estimates of reserves, and the probabilistic method was used to prepare the estimates of resources in this statement.

In converting petajoules to million barrels of oil equivalent, Senex has applied the conversion rate of 1 mmboe = 5.815 PJ. In converting million barrels of oil equivalent to petajoule equivalent for oil and gas liquids, Senex has applied the inverse conversion rate of 1 PJ = 0.172 mmboe, recognising that gas liquids contributions are immaterial. For the purpose of comparative assessment of FY20 and FY19 conversions, a constant conversion factor of 1 mmboe = 5.815 PJ has been applied (previously 1 mmboe = 5.880 PJ in FY19), resulting in a minor movement in FY19 mmboe 2P reserves. Refer to announcement of 20 August 2019 for the independent assessment of FY19 reserves and resources.

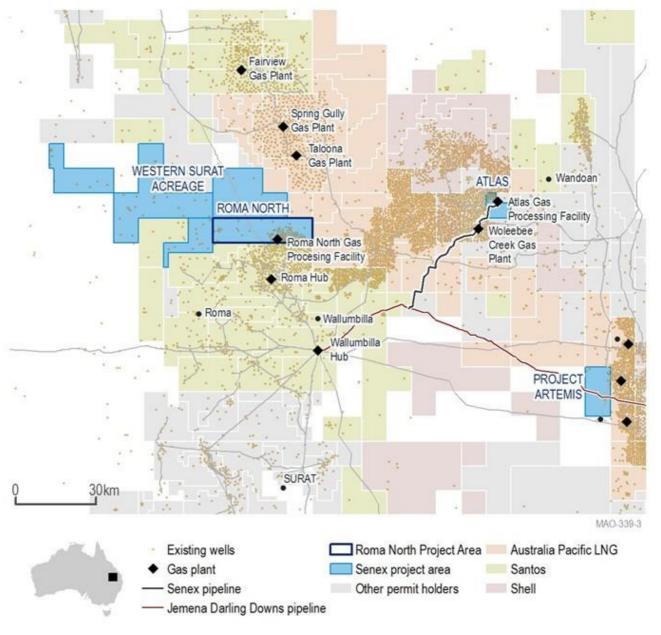
The reference point for the Cooper Basin is the central processing plant at Moomba, South Australia. Fuel, flare and vent consumed to the reference point are included in reserves estimates (c. 7% of 2P oil reserves estimates may be consumed as fuel in operations depending on operational requirements). For the Surat Basin, the reference point is the Wallumbilla gas hub, Queensland. Fuel, flare and vent consumed to the reference point are excluded from reserves estimates (c. 6% of 2P gas reserves estimates have been assumed to be consumed as fuel in operations).

Standard engineering and geoscience methods, or a combination of methods, including volumetric analysis, analogy, and reservoir modelling, were used. Much of these reserves are for undeveloped locations and are based on estimates of reservoir volumes and recovery efficiencies along with analogy of properties with similar geologic and reservoir characteristics.

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