

Key features

- **Record half year production and sales volumes:** Half year production up 76% to 1.16 MMboe and sales volumes up 86% to 1.21 MMboe on increased Sole production
- **Quarterly production down 28% to 0.49 MMboe:** Lower Sole gas production during reconfiguration of the Orbost Gas Processing Plant
- **Quarterly sales revenue up 3% to \$24.6 million:** Higher realised oil and gas prices
- **Commencement of long-term Sole gas sales agreements:** Annual contracted gas volumes of 19.75 PJ in 2021 to deliver a step-change in revenue and cash flow
- **Orbost Gas Processing Plant reconfigured:** APA undertaking absorber testing and commissioning, with production expected to increase to a sustainable rate of 45 TJ/day
- **Athena Gas Plant works commenced:** Project to deliver own processing capacity for Casino Henry gas and future developments

Comments from Managing Director David Maxwell

“Cooper Energy’s performance during the quarter demonstrates our maturing gas business.

“We have commenced supply of material gas volumes to domestic customers under long-term Sole gas sales agreements and established our gas trading function to support these contractual commitments.

“While works continue to establish a stable gas production rate at the Orbost Gas Processing Plant, we are seeing positive signs from reconfiguration of the plant’s absorbers and remain confident that the plant’s capacity rate of 68 TJ/day can be achieved over time.

“In the second half of FY21, higher gas sales volumes and net cash margins will be generated from Sole and underpinned by our Transition Agreement with APA.

“Our east coast gas growth strategy remains unchanged notwithstanding the delays in commissioning the Orbost plant. We believe exploration and development of gas resources in the Otway and Gippsland basins is the most efficient way to increase supply to southern markets”, Mr Maxwell said.

Key performance metrics

<i>\$ million unless indicated</i>	Dec. Q2 FY20	Sep. Q1 FY21	Dec. Q2 FY21	<i>Qtr on Qtr change</i>	FY20 YTD	FY21 YTD	<i>Change</i>
Production (MMboe)	0.27	0.68	0.49	<i>(28%)</i>	0.66	1.16	<i>76%</i>
Sales volumes (MMboe)	0.26	0.68	0.53	<i>(22%)</i>	0.65	1.21	<i>86%</i>
Sales revenue	16.4	24.0	24.6	<i>3%</i>	39.1	48.6	<i>24%</i>
Cash and cash equivalents	150.7	133.6	115.3	<i>(14%)</i>	150.7	115.3	<i>(23%)</i>
Net Debt	73.3	95.8	114.1	<i>19%</i>	73.3	114.1	<i>56%</i>
Ave. gas price (\$/GJ)	8.40	5.61	7.25	<i>29%</i>	8.35	6.35	<i>(24%)</i>

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Financial

Sales volumes and revenue

Sales volumes of 0.53 MMboe were 22% lower than the prior quarter, mainly due to lower Sole gas production during reconfiguration of the Orbest Gas Processing Plant (OGPP) operated by APA. Despite lower production volumes, sales revenue of \$24.6 million was 3% higher than the prior quarter due to higher realised spot gas prices and the commencement of the Sole gas sales agreements (GSAs).

The average realised gas price was up 29% to \$7.25/GJ (Q1 FY21: \$5.61/GJ) and the average realised oil and condensate price was up 28% to \$69.7/boe (Q1 FY21: \$54.3/boe).

No oil hedges were in place during the quarter or are in place as at the date of this report.

		Dec. Q2 FY20	Sep. Q1 FY21	Dec. Q2 FY21	Qtr on Qtr change	FY20 YTD	FY21 YTD	Change
Sales volumes								
Gas ¹	PJ	1.3	3.9	3.0	(23%)	3.4	6.9	103%
Oil	kbbl	47.7	40.0	39.6	(1%)	97.9	79.7	(19%)
Condensate	kbbl	0.7	0.5	0.6	20%	2.3	1.0	(57%)
Total sales volumes	MMboe	0.26	0.68	0.53	(22%)	0.65	1.21	86%
Sales revenue (\$ million)								
Gas ¹		11.2	21.8	21.8	0%	28.5	43.6	53%
Oil and condensate		5.2	2.2	2.8	27%	10.6	5.0	(53%)
Total sales revenue		16.4	24.0	24.6	3%	39.1	48.6	24%
Ave. realised prices								
Gas	\$/GJ	8.40	5.61	7.25	29%	8.35	6.35 ²	(24%)
Oil and condensate	\$/boe	107.4	54.3	69.7	28%	105.8	62.0	(41%)

1. Includes sale of third-party gas purchases of 56 TJ in Q2 FY21

2. Includes sale of gas at spot prices during OGPP commissioning

Capital expenditure

Incurred capital expenditure of \$11.6 million was 103% higher than the prior quarter following commencement of site works at the Athena Gas Plant (Cooper Energy: 50% and operator; Mitsui: 50%). The Athena Gas Plant Project aims to commission own gas processing capacity for the Casino Henry fields in the Otway Basin and future developments. Further commentary is contained in the *Exploration and development* section on page 6.

Shared capital expenditure in relation to OGPP Phase 2 works and commissioning has been expensed. Further information is contained in the *Transition Agreement with APA* section on page 4.

Updated full year FY21 capital expenditure guidance will be provided with Cooper Energy's half year results on 15 February 2021.

\$ million		Dec. Q2 FY20	Sep. Q1 FY21	Dec. Q2 FY21	Qtr on Qtr change	FY20 YTD	FY21 YTD	Change
Exploration and appraisal		6.6	1.1	1.0	(9%)	32.7	1.8	(94%)
Development		17.8	4.6	10.6	130%	31.1	15.2	(51%)
Total		24.4	5.7	11.6	103%	63.8	17.0	(73%)

By basin \$ million	Dec. Q2 FY21			FY21 YTD		
	Exploration	Development	Total	Exploration	Development	Total
Otway Basin	0.5	8.3	8.8	0.8	12.6	13.4
Gippsland Basin	0.5	0.0	0.5	1.0	0.0	1.0
Cooper Basin	0.0	0.5	0.5	0.0	0.5	0.5
Other	0.0	1.8	1.8	0.0	2.1	2.1
Total	1.0	10.6	11.6	1.8	15.2	17.0

Liquidity

As at 31 December 2020, Cooper Energy had cash reserves of \$115.3 million (Q1 FY21: \$133.6 million) and drawn debt of \$229.4 million (no change).

\$ million	Dec. Q2 FY20	Sep. Q1 FY21	Dec. Q2 FY21	Qtr on Qtr change
Cash and cash equivalents	150.7	133.6	115.3	(14%)
Drawn debt	224.0	229.4	229.4	–
Net debt	73.3	95.8	114.1	19%

Commercial and corporate

Sole Gas Sales Agreements

As announced on 30 December 2020, Cooper Energy has commenced supply of Sole gas to its utility and industrial customers under long-term GSAs. These GSAs total 19.75 PJ of gas supply in 2021 (54 TJ/day average) and provide annual take-or-pay obligations for minimum supply of 90% of the contracted volumes.

Prior to commencement of the GSAs, Sole gas was being sold at spot prices, less transportation costs, with revenue and operating costs shared with APA per the Transition Agreement (announced 20 August 2020 and 30 October 2020 and described in the *Transition Agreement with APA* section on page 4). Commencement of the Sole GSAs delivers a material step change in revenue and cash flow.

To ensure Sole GSA commitments are satisfied while commissioning of OGPP continues, Cooper Energy has secured alternative gas supply sources and established an internal gas trading function. Alternative gas supply sources include contracted volumes on an as needs basis, uncontracted Casino Henry gas to support spot market purchases and gas services rights on the Eastern Gas Pipeline.

As provided for in the Transition Agreement, APA will make contributions to the cost of certain back-up supply arrangements in instances of production shortfalls. This provides Cooper Energy with a comparable net cash margin as if all required Sole GSA volumes had been processed at OGPP and made available for sale. The Transition Agreement expires at the earlier of commissioning or 1 May 2021, with the option for Cooper Energy to extend by one year.

Board change

As announced on 11 November 2020, Ms Alice Williams stepped down from the board of directors, effective 12 November 2020. Ms Williams served as a non-executive director since 2013 and was Chairman of the Audit Committee for most of her tenure.

Transition Agreement with APA

Cooper Energy and APA entered into a Transition Agreement to provide the framework for commencing Sole GSAs and commissioning OGPP as early as possible, as announced on 20 August 2020 and 30 October 2020. The Transition Agreement provides for revenue and cost sharing mechanisms during the commissioning phase and contributions to Cooper Energy for costs incurred in sourcing alternative gas, if required, to service the Sole GSA commitments. Key elements of the Transition Agreement are summarised below.

Transition Agreement with APA

Overarching objective	<ul style="list-style-type: none">• Commence Sole GSAs as early as possible
Revenue and cost sharing	<ul style="list-style-type: none">• For gas volumes sold on the spot market prior to reaching commissioning (Practical Completion) of OGPP, associated revenue and operating costs are shared equally by Cooper Energy and APA• Agreed capital expenditure in relation to OGPP Phase 2 works and commissioning are shared equally by Cooper Energy and APA
Commencement of GSAs	<ul style="list-style-type: none">• Sole GSAs commenced on 1 December 2020 and 1 January 2021 for gas supply of 19.75 PJ (54 TJ/day average) in 2021, with annual take-or-pay obligations for minimum supply of 90% of contracted volumes• All revenue associated with Sole GSA gas sales is attributable to Cooper Energy• Cooper Energy to pay a tariff to APA for Sole GSA volumes processed at OGPP at rates consistent with the original Gas Processing Agreement
Compensation arrangements	<ul style="list-style-type: none">• If daily OGPP gas processing does not meet Sole GSA volume requirements, APA will contribute to the cost of sourcing gas from back-up supply arrangements• Compensation arrangements provide Cooper Energy with a comparable net cash margin as if all the gas had been processed at OGPP
Term	<ul style="list-style-type: none">• Expiry at the earlier of OGPP Practical Completion or 1 May 2021, with the option for Cooper Energy to extend by one year

Subject to audit, for the six months ended 31 December 2020 Cooper Energy will recognise a \$7.6 million expense for APA's share of revenue from gas volumes sold on the spot market, and a \$3.2 million expense for Cooper Energy's share of associated operating costs. No processing tariffs are payable by Cooper Energy for gas volumes sold on the spot market. Minimal sales of gas volumes on the spot market are expected in H2 FY21 due to commencement of Sole GSAs on 1 December 2020 and 1 January 2021.

Production

Oil and gas production of 0.49 MMboe was 28% lower than the prior quarter, mainly due to lower gas production from Sole while OGPP was reconfigured. Sales gas production of 2.7 PJ was 30% lower than the prior quarter and oil and condensate production of 40.7 kbbl was in line with the prior quarter.

An updated outlook for full year FY21 production will be provided with Cooper Energy's half year results on 15 February 2021.

Gippsland Basin (Sole)

Sole gas production of 1.4 PJ was 46% lower than the prior quarter, mainly due to reconfiguration works undertaken at OGPP.

As announced on 9 December 2020, works were undertaken by APA in November and December 2020 to reconfigure the sulphur recovery unit's two absorbers to enable operation of absorbers either independently, in parallel or in series. The plant was consequently offline for 26 days, with production recommencing on 8 December 2020. Subsequent to quarter-end, processing rates at OGPP have been variable while testing and commissioning of absorber operations have been undertaken.

Otway Basin (Casino Henry)

Casino Henry gas production of 1.3 PJ was in line with the prior quarter. Work was successfully completed in December 2020 to remediate scaling of Henry-2 well infrastructure. A production uplift of up to 1.5 TJ/d (gross) from these remediation works has been achieved.

Cooper Basin

Oil production of 40.2 kbbl was in line with the prior quarter. Production from ex-PEL 92 contributed 38.4 kbbl (Q1 FY21: 39.0 kbbl) and the Worrior field in PPL 207 contributed 1.8 kbbl (Q1 FY21: 1.9 kbbl).

By product		Dec. Q2 FY20	Sep. Q1 FY21	Dec. Q2 FY21	Qtr on Qtr change	FY20 YTD	FY21 YTD	Change
Sales gas	PJ	1.3	3.9	2.7	(30%)	3.4	6.6	94%
Oil and condensate	kbbl	49.8	41.3	40.7	(2%)	103.5	82.1	(21%)
Total production	MMboe	0.27	0.68	0.49	(28%)	0.66	1.16	76%

By basin		Dec. Q2 FY20	Sep. Q1 FY21	Dec. Q2 FY21	Qtr on Qtr change	FY20 YTD	FY21 YTD	Change
Gippsland Basin								
Sole								
Sales gas	PJ	–	2.6	1.4	(46%)	–	3.9	n/m
Otway Basin								
Casino Henry								
Sales gas	PJ	1.3	1.3	1.3	2%	3.1	2.7	(14%)
Condensate	kbbl	0.7	0.5	0.5	8%	1.6	1.0	(37%)
Cooper Basin								
Oil	kbbl	49.1	40.9	40.2	(2%)	101.2	81.1	(20%)
Total production	MMboe	0.27	0.68	0.49	(28%)	0.66	1.16	76%

NB. Preliminary Cooper Basin production data for current quarter

Exploration and development

Gippsland Basin

Development

Orbost Gas Processing Plant

As previously reported, the performance of OGPP has been impaired by foaming in the sulphur recovery unit's two absorbers, which has required regular maintenance and cleaning. During the quarter, APA reconfigured the plant to enable operation of absorbers either independently, in parallel or in series. This has provided greater operational flexibility and the ability to conduct cleaning of absorbers while minimising interruption to production.

The reconfiguration works were undertaken in November and December 2020. The plant was consequently offline for 26 days, with production recommencing on 8 December 2020. Since then, and subsequent to quarter-end, processing rates at OGPP have been variable while testing and commissioning of absorber operations have been undertaken. These works included, but were not limited to, the following.

- Tuning of new flow control valves and electrical instrumentation.
- Testing of absorber operations in parallel, series and independent modes.
- Rectification of various commissioning and start-up issues encountered during the reconfiguration process.
- Cleaning of each absorber, which commenced on 19 January 2021 and is scheduled to be complete by the end of January 2021.

APA is continuing absorber testing and commissioning, with production expected to increase to a sustainable rate of 45 TJ/day. Cleaning of each absorber is expected to occur approximately every six weeks, with production limited to one absorber during the three-day cleaning cycle for each absorber.

Cooper Energy and APA, together with the technology provider, are working collaboratively and diligently to determine the root cause of the foaming and fouling in the absorbers.

Exploration

A suspension and extension of VIC/P72 was received from NOPTA during the quarter, with the permit's primary term now expiring in May 2023. VIC/P72 adjoins VIC/RL16, which holds the Patricia-Baleen gas field and associated subsea production infrastructure connected to OGPP. VIC/P72 is close to several Esso-operated oil and gas fields including Remora, Snapper, Sunfish and Sweetlips, and the SGH Energy-operated Longtom gas field. Prospects identified in VIC/P72 are analogues to offset fields.

In VIC/P75, interpretation of the reprocessed 3D seismic data was completed, with depth conversion now underway. VIC/P75 is located in the central area of the Gippsland Basin and is surrounded by major fields including the Marlin, Snapper and Barracouta gas fields to the north, and the Kingfish and Fortescue oil fields to the south and east.

Otway Basin (Offshore)

Development

Athena Gas Plant Project

The Athena Gas Plant Project commenced in October 2020 following COVID-19 related delays during the prior quarter. The project involves commissioning the Athena Gas Plant to process gas and liquids from the Casino Henry fields in the Otway Basin, and future developments. Benefits of the project include:

- gas processing productivity gains and higher production rates compared with current processing at the Iona Gas Plant due to lower plant inlet pressure;
- lower operating costs and cessation of Iona Gas Plant processing tolls; and
- opportunity to enter firm GSAs with uninterruptable supply.

A Final Investment Decision for the project was taken in July 2020 and site works commenced in October 2020, including inspections, maintenance work and replacement of major equipment items. Key procurement and service contracts have been awarded. The project is currently more than 40% complete and works are progressing to schedule. Casino Henry gas is expected to be processed in the plant in Q1 FY22.

Otway Phase-3 Development Project

The Otway Phase 3 Development Project (OP3D) involves development of the Annie gas discovery and Henry gas field to produce more than 120 PJ of gas through the Athena Gas Plant. OP3D is currently in the Select phase with a Final Investment Decision expected in Q1 FY22.

Planning for development drilling is underway with potential for drilling as part of a broader program targeting commencement in the second half of 2022.

Exploration

Suspension, extension and variations for VIC/P44 and VIC/P76 were received from NOPTA during the quarter, with the permits' primary terms now expiring in May 2023 and September 2024, respectively. Work program variations have amended the proposed quantitative seismic study to 3D seismic reprocessing.

Reprocessing of 3D seismic data commenced at the end of the quarter and is expected to be completed in Q2 FY22. This reprocessing covers VIC/P76, VIC/P44, VIC/L24, VIC/L30, VIC/L33 and VIC/L34.

Studies are progressing in relation to the Pecten East, Juliet and Nestor exploration prospects. Together with Elanora, these prospects have potential for inclusion in the OP3D drilling campaign. All prospects show strong seismic amplitude support for the presence of gas and are close to existing production infrastructure.

Otway Basin (Onshore)

Exploration

Activity during the quarter focused on PEL 494, which contains the Dombey gas discovery in the Penola Trough. Planning for 3D seismic acquisition in PEL 494 continued, with seismic acquisition expected to be conducted in Q2 FY22.

Revised work programs for PEP 150, PEP 168 and PEP 171 were submitted to the Victorian Department of Jobs, Precincts and Regions in preparation for lifting of the current onshore Victorian permit suspension on 1 July 2021.

Cooper Basin

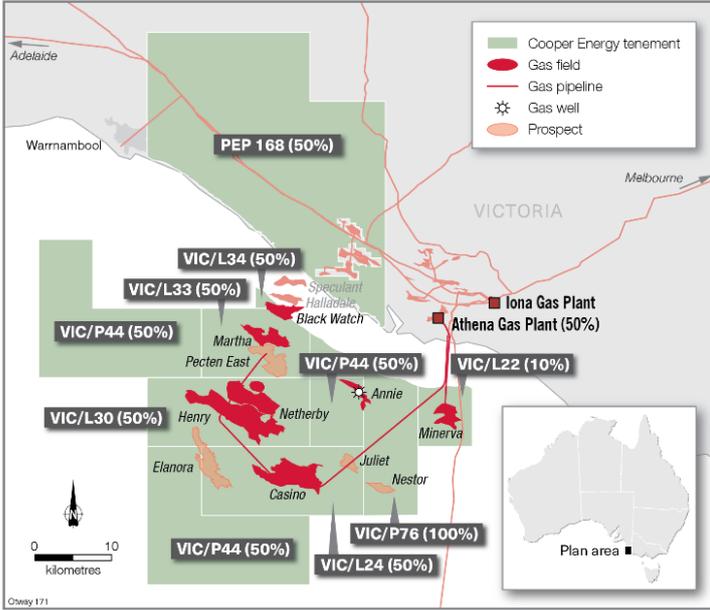
Development

Planning commenced for Callawonga-13, a horizontal oil development well in ex-PEL 92. It is planned to drill an approximate 1,500 metre horizontal well in the McKinlay Formation of the Callawonga field. The objective is to increase oil production and access undeveloped and new reserves. Drilling is scheduled to commence in Q3 FY21.

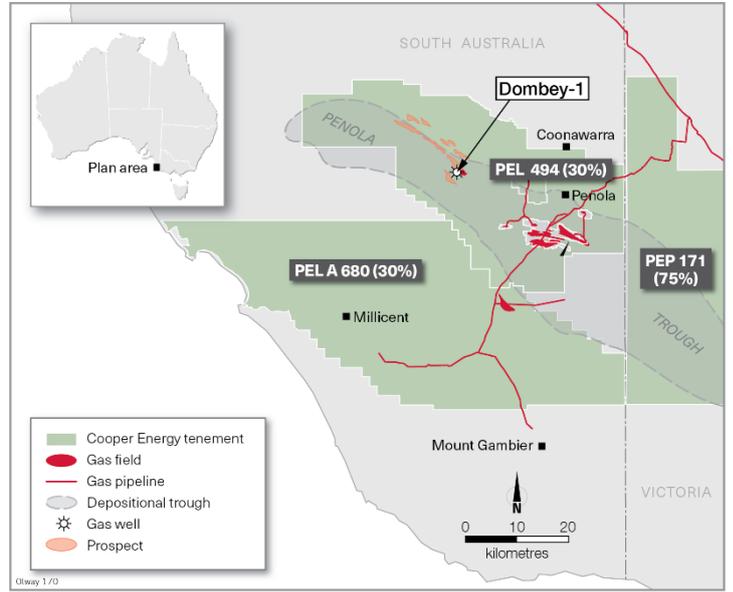
Cooper Energy tenements

Please refer to Cooper Energy's 2020 Annual Report for further information in relation to tenement interests.

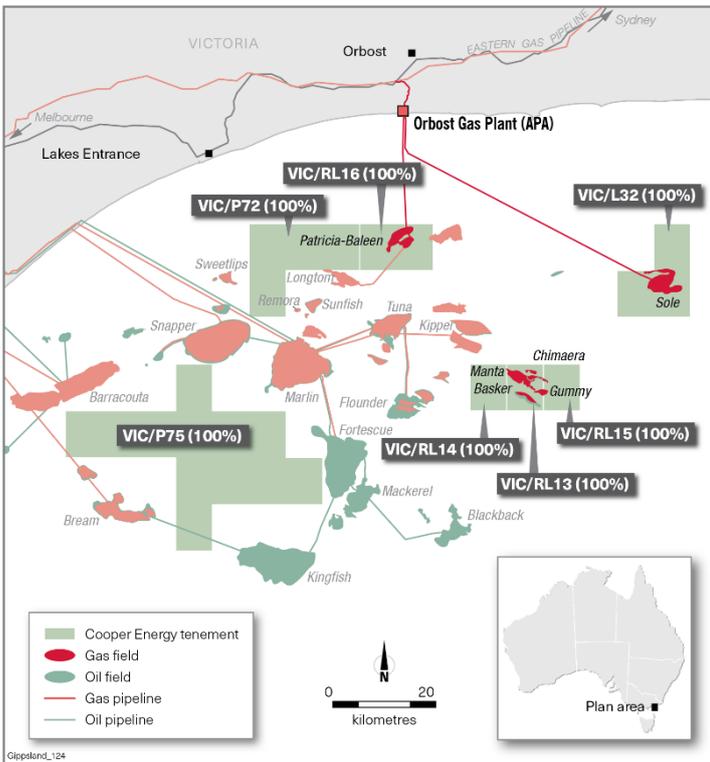
Otway Basin (Victoria):



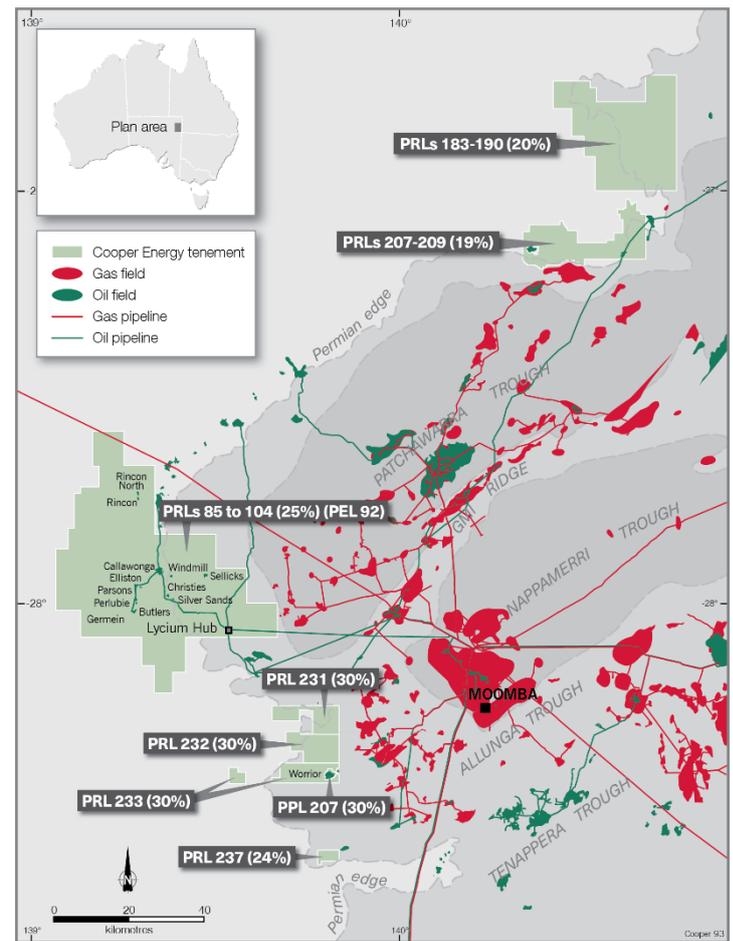
Otway Basin (onshore):



Gippsland Basin:



Cooper Basin:



Terms, abbreviations and conversion factors

Terms and abbreviations

\$	Australian dollars
APA	APA Group (ASX: APA)
bbl	Barrels
Bcf	Billion cubic feet of gas
bopd	Barrels of oil per day
Cooper Energy	Cooper Energy Limited ABN 93 096 170 295
FEED	Front End Engineering and Design
FID	Final Investment Decision
GSA	Gas Sales Agreement
kbbl	Thousand barrels
km	Kilometres
m	Metres
MMboe	Million barrels of oil equivalent
MMscf/day	Million standard cubic feet of gas per day
n/m	Not meaningful
NOPTA	National Offshore Petroleum Titles Administrator
OGPP	Orbost Gas Processing Plant
PEL	Petroleum Exploration Licence
PEP	Petroleum Exploration Permit
PJ	Petajoules
PPL	Petroleum Production Licence
PRL	Petroleum Retention Lease
scf	Standard cubic feet of gas
TJ	Terajoules
YTD	Year to date

Conversion factors

Gas	1 PJ	= 0.163 MMboe
Oil	1 bbl	= 1 boe
Condensate	1 bbl	= 0.935 boe

Disclaimer

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