

## Monthly drilling report – March 2014

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### Key points

- 25 wells drilled of more than 30 wells planned for FY14, with 23 cased and suspended for further testing and production
- Worrior-10 appraisal well confirms oil in the Patchawarra Formation
- Vintage Crop-5 appraisal well cased and suspended as a future Murta oil producer and McKinlay injection well
- Spitfire-5 development well cased and suspended as a future Birkhead oil producer
- Drilling ahead on Spitfire-3 appraisal well

### OIL EXPLORATION, APPRAISAL AND DEVELOPMENT

During March 2014, Senex Energy Limited (Senex, ASX: SXY) drilled, cased and suspended three oil wells for further testing and production. Since 1 July 2013, Senex and its joint venture partners have drilled 25 oil wells and 23 have been cased and suspended. Senex is currently drilling ahead on a second well at Spitfire oil field on the western flank.

#### **Worrior-10 appraisal well** (*PPL 207: Senex 70% and operator*)

The Worrior-10 appraisal well intersected 4.5 metres net pay in the Patchawarra Formation and 4.9 metres of calculated net pay in the Murta Formation. A three-hour drill stem test successfully recovered oil, drilling mud and minor gas flows, confirming the presence of oil in the Patchawarra Formation 100 metres to the north of the Pando-1 well on the north-western flank of the Worrior structure.

Ensign Rig 48 commenced drilling the well on 27 February and reached a total depth of 1,791 metres. The well has been cased and suspended as a Patchawarra oil producer. Worrior-8 has previously flowed oil from the Patchawarra Formation at a rate of 670 barrels of oil per day and gas at 0.7 million standard cubic feet per day during testing.

**Vintage Crop-5 appraisal well** (*PEL 516: Senex 100%*)

Vintage Crop-5 was cased and suspended as a future Murta oil producer after intersecting 4.3 metres of calculated net oil pay in the Murta Formation. Senex produces oil from the Murta Formation in the nearby Mirage Field. Vintage Crop-5 also intersected 5 metres of porous sand with oil and gas shows in the McKinlay Member.

Oil saturation derived from petrophysical analysis indicates that the well encountered the McKinlay reservoir close to the oil-water contact, which previously had not been intersected in the field. Accordingly, Vintage Crop-5 represents the south-western boundary of the McKinlay Formation reservoir at this location. Senex considers the well to be an ideal candidate for secondary recovery from the McKinlay Formation using production enhancement techniques such as water injection.

EDA Rig 3 commenced drilling the well on 8 March, approximately 550 metres south west of Vintage Crop-1, and reached a total depth of 1,716 metres.

**Spitfire-5 development well** (*PEL 104: Senex 60% and operator*)

The Spitfire-5 development well intersected 18 metres of good oil and gas shows, including oil in the drilling mud, in the mid Birkhead primary objective. Evaluation of wireline logs indicates 7.3 metres of porous sandstone above the field oil-water contact. The well was cased and suspended as a future oil producer.

Ensign Rig 48 commenced drilling the Spitfire-5 development well on 23 March as part of an integrated appraisal and development plan to maximise recovery from the field. The well is located 440 metres south east of Spitfire-2 and will act as an additional drainage point for oil in the mid Birkhead reservoir encountered in previous Spitfire wells. The well reached total depth of 1,845 metres on 29 March.

**Spitfire-3 appraisal well** (*PEL 104: Senex 60% and operator*)

EDA Rig 3 commenced drilling on the Spitfire-3 appraisal well on 24 March. The well will test the northern extent and quality of the mid-Birkhead reservoir encountered by the previous Spitfire wells approximately 830 metres north of the Spitfire-2 surface location. Spitfire-3 will be deviated to also test the hydrocarbon potential of the Poolowanna Formation, which contained oil shows in Callabonna-1, south of PEL 104. Total depth is expected to be approximately 2,070 metres.

## **FORWARD OIL DRILLING PROGRAM**

In April 2014, Senex will have three rigs working across its western flank permits to drill and complete wells as part of its 30+ oil drilling program for FY14.

Upcoming drilling targets include:

### **Spitfire-6 development well** (*PEL 104: Senex 60% and operator*)

Spitfire-6 will be drilled approximately 450 metres north east of Spitfire-2 to a total depth of approximately 1,820 metres. This development well will act as an additional drainage point for oil in the mid-Birkhead reservoir at the Spitfire oil field, as part of the integrated appraisal and development plan for the field.

### **Mustang-2 and Mustang-3 appraisal wells** (*PPL 243: Senex 60% and operator*)

During April, Senex will drill two appraisal wells at Mustang oil field, which is located to south west of Snatcher oil field:

- The Mustang-3 appraisal well will be drilled 560 metres south, south-west of Mustang-1 with a primary target in the mid Birkhead reservoir that produces oil in Mustang-1. Total depth is expected to be approximately 1,905 metres.
- The Mustang-2 appraisal well will be drilled approximately 570 metres north-west of Mustang-1 with a primary target in the mid Birkhead Formation. Total depth is expected to be 1,920 metres.

These are the first two wells to be drilled on the new Lignum 3D seismic survey, using elastic impedance and AVO inversion to optimise the location of these wells.

## DRILLING REGISTER

Exploration, appraisal and development drilling undertaken in FY14 is shown below. The location of Senex oil fields is shown in Figure 1.

### Oil

Well	Location	Spud date	Type	Result*
Worrior-8	PPL 207	22-Jun-2013	Development	Up to 18 metres in the McKinlay, Namur, Birkhead and Patchawarra
Worrior-9	PPL 207	4-Jul-2013	Exploration	Plugged and abandoned
Burruna-2	PEL 115	6-Aug-2013	Exploration	5.3 metres of net pay in the Namur 3,600 bopd during testing
Acrasia-7	PPL 203	24-Aug-2013	Development	7.1 metres of net pay in the Hutton, Poolowanna, Tinchoo and Arrabury
Ventura-2	PPL 214	28-Aug-2013	Development	13.4 metres of net pay in the Murta and McKinlay
Kobari-2	PEL 516	14-Sep-2013	Exploration	Oil shows over 22 metres
Pirie-1 <sup>1</sup>	PEL 105	30-Sep-2013	Exploration	Moderate oil shows in the Birkhead Formation
Dunlop-1	PEL 113	1-Oct-2013	Exploration	Approx 3 metres of net pay in the McKinlay 1,200 bopd during drill stem testing
Moothandella-4 <sup>2</sup>	ATP 794P	5-Oct-2013	Appraisal	10 metres of net pay Murta, Namur and Westbourne
Sprigg-1	PEL 514	6-Oct-2013	Exploration	6.3 metres of net pay in the Murta
Pirraminta-2	PEL 514	22-Oct-2013	Exploration	Residual oil. Cased and suspended as a future water well
Burruna-3	PEL 115	8-Nov-2013	Appraisal	Interpreted net pay of approximately 3 metres in the lower Birkhead
Acrasia-6	PPL 203	14-Nov-2013	Appraisal	32.8 metres of net pay in the Hutton, Poolowanna and Tinchoo
Vintage Crop-3	PPL 241	24-Nov-2013	Appraisal	4.2 metres of net pay in the Murta and Birkhead
Growler-13	PPL 242	27-Dec-2013	Exploration	Oil-saturated interval intersected
Acrasia-8	PPL 203	30-Dec-2013	Development	29.8 metres of net pay in the Birkhead, Hutton, Poolowanna and Tinchoo
Mirage-5	PPL 213	04-Jan-2014	Appraisal	12.1 meters of net pay in the Murta
Spitfire-4	PEL 104	09-Jan-2014	Appraisal	13.8 metres of net pay in the Birkhead
Growler-12	PRL 15	17-Jan-2014	Appraisal	Intersected an oil saturated interval
Snatcher-11	PPL 240	31-Jan-2014	Appraisal	Approximately 4.5 metre oil-saturated interval intersected in the Birkhead

Well	Location	Spud date	Type	Result*
Mirage-6	PPL 213	01-Feb-2014	Appraisal	11.6 metres of net pay in the Murta
Vintage Crop-4	PEL 516	21-Feb-2014	Appraisal	2.5 metres of net pay in the McKinlay 8.0 metres of net pay in the Murta
Warrior-10	PPL 207	27-Feb-2014	Appraisal	4.5 metres of net pay in the Patchawarra 4.9 metres of calculated net pay in the Murta
Vintage Crop-5	PEL 516	08-Mar-2014	Appraisal	4.3 metres of calculated net pay in the Murta 5 metres of porous sand with oil and gas shows in the McKinlay Member
Spitfire-5	PEL 104	23-Mar-2014	Development	7.3 metres of net pay in the Birkhead
Spitfire-3	PEL 104	24-Mar-2014	Appraisal	Drilling ahead

\* Net pay figures represent the latest calculations and may differ from originally published numbers.

## Gas

Well	Location	Spud date	Type	Result
Paradise Downs-10 <sup>3</sup>	PL 171	13-Aug-2013	Appraisal	Cased and suspended
Kato-3 <sup>4</sup>	ATP 593P	13-Oct-2013	Exploration	Plugged and abandoned after testing
Kato-4 <sup>4</sup>	ATP 593P	27-Oct-2013	Exploration	Plugged and abandoned after testing
Indy-3 <sup>4</sup>	ATP 771P	22-Nov-2013	Exploration	Plugged and abandoned after testing
Indy-4 <sup>4</sup>	ATP 771P	9-Dec-2013	Exploration	Plugged and abandoned after testing

1 Operated by Tellus Resources

2 Operated by Bridgeport Energy

3 Operated by QGC

4 Core hole not designed for gas production

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## Competent person

Information about Senex's reserves and resources estimates have been compiled in accordance with the definitions and guidelines in the 2007 SPE PRMS. The information is based on, and fairly represents, information and supporting documentation prepared by, or under the supervision of, Mr James Crowley BSc (Hons) who has consented to the inclusion of this information in the form and context in which it appears in this report. Mr Crowley is a qualified petroleum reserves and resources evaluator, a member of Society of Petroleum Engineers and full time employee of Senex.

Figure 1: Senex conventional oil fields (operated and non-operated)

