# Notification of Discovery Section 64 Petroleum Act 1984 (NT) Surprise-1 Re-entry H EP-115

Amadeus Basin
NORTHERN TERRITORY

Frontier Oil & Gas Pty Ltd as owner of EP 115

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## **Location EP-115**

Permit EP-115 is an onshore block comprising of 169 whole or part blocks and is located on the north western edge of the Amadeus Basin in the Northern Territory. The eastern boundary of the permit is located approximately 200 km west of Alice Springs (Figure 1).

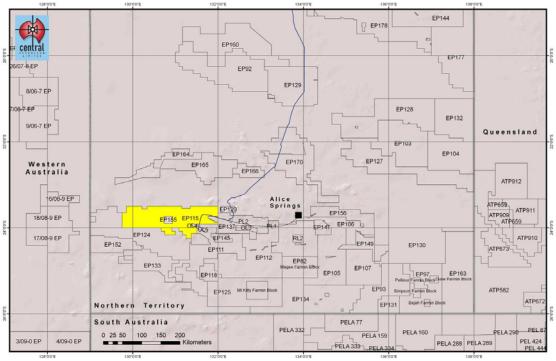


Figure 1 EP-115 Regional Location Map

## **Details EP-115**

EP-115 is operated by Central Petroleum Limited (CTP) as authorised agent and representative of the permit owner Frontier Oil & Gas Pty Ltd (FOG). FOG is a 100% subsidiary of CTP.

FOG has a 100% interest in EP-115.

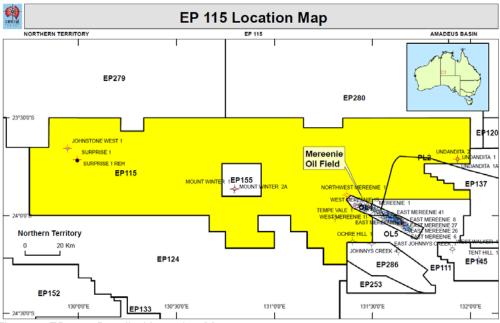


Figure 2 EP-115 Detailed Location Map

### EP-115 Surprise-1 Re-entry H Notification of Petroleum Discovery

The permit was awarded on 17 August 2007 and is currently in the fourth permit year. The third permit year for EP-115 was covered in the period of 17 August 2010 to 16 August 2011. FOG had previously obtained a 'suspension and extension' for permit year 2 in August 2009, deemed to be represented by the period 17 August 2008 to 16 August 2010. FOG completed its permit year 3 commitment programme via the completion of geophysical and geological studies (G&G). Johnstone West-1 fulfilled the year 2 commitment program (Figure 3). Surprise-1 was drilled as part of permit year 3 (Figure 3) and credited towards the permit year 5 commitment programme (Figure 3).

Year of Term	Permit Year Starts	Permit Year Ends	Minimum Work Requirements	Estimated Expenditure Constant A \$ (indicative only)
1	17/08/2007	16/08/2008	G and G Studies	100,000
2	17/08/2008	16/08/2010	One Well - 216km Seismic Acquisition	6,850,000
3	17/08/2010	16/08/2011	G and G Studies	100,000
4	17/08/2011	16/08/2012	G and G Studies	100,000
5	17/08/2012	16/08/2013	One well	1,200,000

Figure 3: Commitment programme EP-115. Note: costs are generally under-estimated due to the age of the original application.

# **Notification of Discovery of Petroleum**

Surprise-1 was drilled in the western part of the Amadeus Basin, approximately 400 km west of Alice Springs and 7 km southwest of Johnstone West-1. The well was spudded on 11 October 2010 and reached an interim TD of 2,555m on the 2 December 2010 where mechanical problems with the rig's mast brought about by drilling crew removing structural guy-wires to the monkey board forced drilling operations to be suspended. After attempts to rectify the problem, the well was plugged back and suspended on the 5 December 2010. Good oil shows were encountered in the lower Stairway Sandstone and a core was cut over the interval 2546–2555 m. The core recovered 8.38 m of fair to good reservoir-quality sandstone bearing excellent oil shows and free oil. A wireline formation tester and sampler were then run. Due to mechanical problems with the rig, drilling operations were terminated at the end of the core run. The other objectives (i.e. Horn Valley Siltstone, Pacoota Sandstone) were not penetrated.

Surprise-1 was renamed Surprise-1 Re-entry H and was re-entered on 18 November 2011. The primary purpose of the re-entry was to penetrate the Stairway Sandstone and Pacoota Sandstone and drill a horizontal leg to the southeast to further assess the reservoir. A window was milled in the casing above the Middle Stairway Sandstone and a 6 inch sidetrack was drilled horizontally to approximately 230m through the interpreted Lower Stairway oil column. The horizontal section was completed as a "barefoot" (uncased open hole).

The re-entry vertical well drilled to a total measured depth of 2732m MD, and a true vertical depth of 2727m TVD, and a total of 2853m MD for the horizontal.

The map (Figure 4) which defines the pre drilling structure is currently being reinterpreted and integrated with data derived from the Surprise-1 Re-entry H logs.

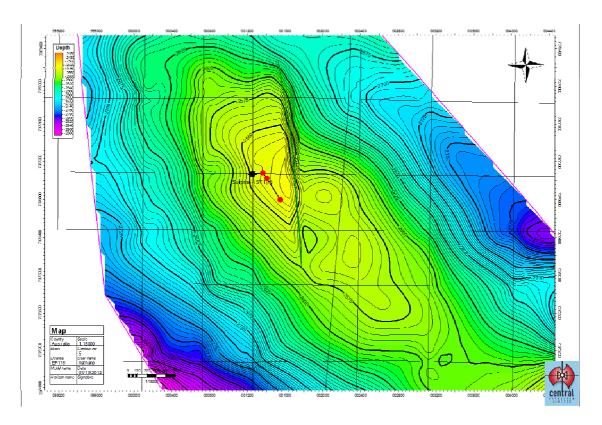


Figure 4 Surprise-1 Re-entry H-ST Lower Stairway Sandstone Depth Map

Surprise-1 Re-entry H intersected oil in the Lower Stairway Sandstone formation and initial flow tests produced between 300-400 bpd. It is planned to undergo an Extended Production Test (EPT) which may lead to commercial production. Figure 5 illustrates the interpretation of seismic lines located through the approximate crest of the structure.

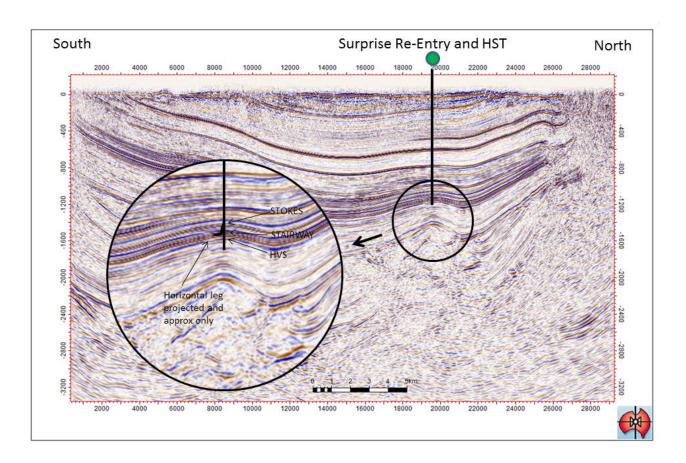


Figure 5 Surprise-1 Re-entry HST-1 on Seismic. Note: additional deeper targets will probably be drilled in later drilling campaigns.

Surprise-1 Re-entry H has confirmed the presence of oil.

Initial flow testing of the Surprise-1 Re-entry H well finished on 13 January 2012 after recording a sustained flow rate via a 32/64" choke of 380 bbls/day believed to be from the Lower Stairway Sandstone (Figure 6) with a low 4.4% drilling fluid and/or water cut. The final PBU (Pressure Build Up) was 523 PSI. The oil flowed to date is a "light sweet crude" with an API Gravity averaging 40 Degrees. There is no evidence of Hydrogen Sulphide ( $H_2S$ ).

Frontier Oil & Gas Pty Ltd formally notifies the Department of Resources that Surprise-1 Re-entry H as an oil (petroleum) discovery pursuant to section 64 of the Petroleum Act 1984 (NT).

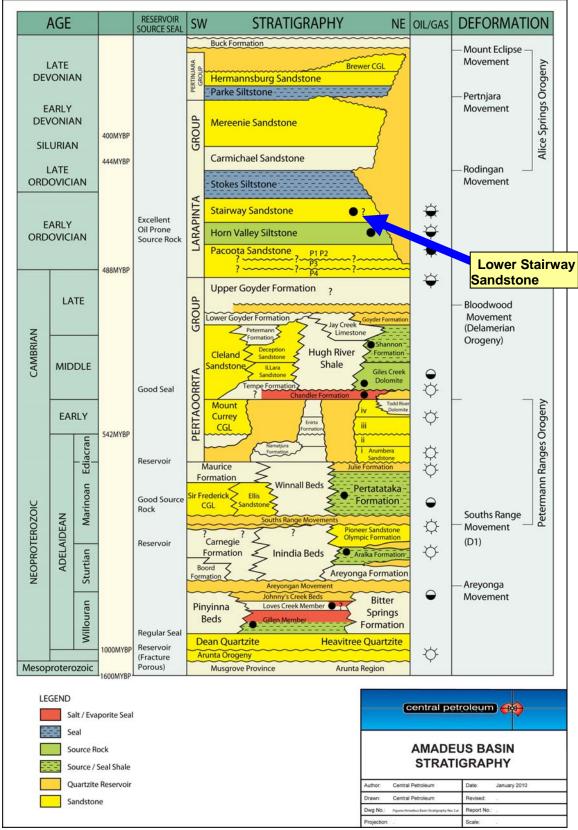


Figure 6 Amadeus Basin Stratigraphy

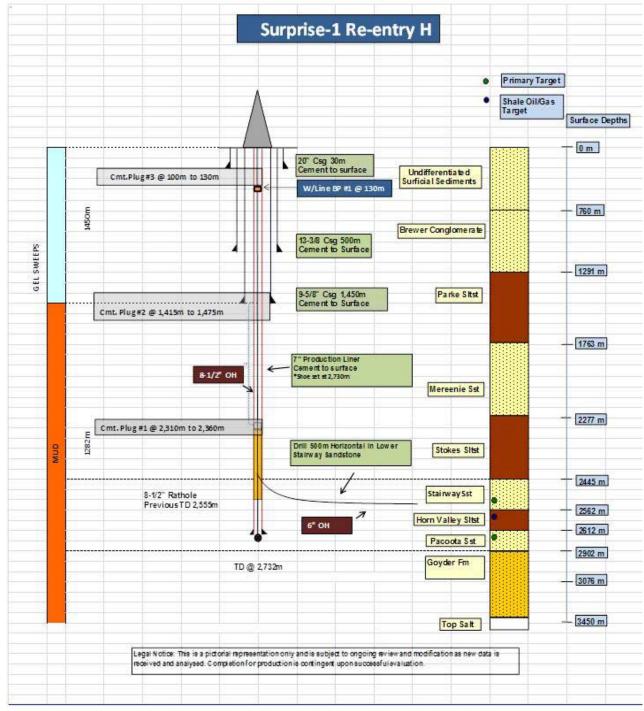


Figure 7. The Surprise-1 Re-Entry and HST-1 Well stick.

The well was temporarily shut-in on 13 January 2012. It is planned to seek agreement on a sales contract and the necessary permitting, approvals and logistics for oil production during an EPT, anticipated to commence within 2-3 months and to extend for up to several months. It is possible that further improvements in flow rate may be recorded during the EPT.

All relevant geological, petrophysical and flow testing data gathered from the drilling of Surprise-1 Re-entry H as well as all available seismic data is being prepared for comprehensive analysis to better define the reservoir potential and design the most appropriate EPT.

Options for a second well at the Surprise prospect prior to running a 3D seismic programme and using the existing drilling rig are being examined.