	<p>Upstream Petroleum Pty Ltd</p> <p>Engineering</p> <p>Report</p>	<p>DOCUMENT NO : UP/TXU/WO/GH/02</p>
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<p><u>Iona-2 Work Over Report</u></p>		<p>REVISION: A</p>
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1 OBJECTIVES

The Iona-2 work over conducted during December 2003 had the following objectives as defined in the document "Coiled Tubing Sand Cleanout & Electric Logging At Iona-2" (TWI 171):

- Sand fill had been identified at a depth of 1326 mKB in Iona-2, covering a PX plug/prong set in a 2.313" XN nipple at 1333 mKB. This sand fill was to be washed out to enable recovery of the PX plug/prong, utilising coiled tubing and nitrified foam supplied by Schlumberger.
- The PX plug and prong was to be recovered using Expertest slickline.
- Subsequently a Schlumberger Reservoir Saturation tool (RST) and static gradient survey was to be run to determine the current gas-water contact in the well and the static bottom hole pressures and temperatures.
- Following electric line logging, the lower sand B-Sand (1353.5m – 1355.5mKB) was to be isolated by setting a 2-1/8" Posiset plug and dump bailing cement.

2 EXECUTIVE SUMMARY

The work over objectives defined above were not achieved.

Sand fill was washed out to only 1329.7m utilising coiled tubing and nitrified foam. A few large pieces of metallic debris were recovered from the top of the lower completion assembly. Similar metallic debris prevented access to the XN nipple and PX prong with the sand washing system.

The metallic debris was identified as the expendable components of 1-11/16" PivotGun perforating systems deployed in a previous work over conducted in April 1999.

An additional week of operations above original expectations was devoted to attempting to remove the metallic debris with a spread that was engineered for sand fill. Operations were suspended with no significant debris removal below the top the lower completion assembly.

Brief estimates indicate that the PX plug and prong could be recovered for approximately US\$250,000 in operating, consumable and mobilization charges assuming that the PivotGun debris can be removed in ten days snubbing.

3 PROGRAM SUMMARY

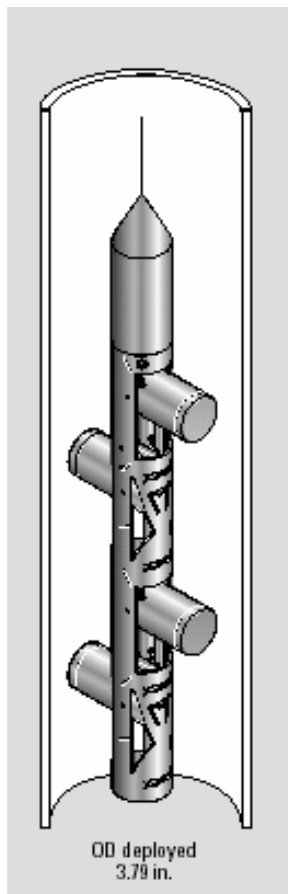
A detailed report of each day's activities appears in the appendices. A summary appears below:

- Expertest was mobilized on Nov-25 per TWI 171 and a 2.30" drift tagged at 4345'KB on Nov-26.
- On Nov-25 Schlumberger advised that their CT unit was rained in at Moomba and would be delayed thus Expertest was de-mobilized on Nov-26.
- Schlumberger CT and Expertest spreads arrived on Dec-5 and rigged up on Dec-6.
- Two runs with a centralized CT sand wash BHA could not wash below the top of the lower packer on Dec-7.
- A slickline bailer recovered small pieces of 1-11/16" PivotGun debris and a CT sand wash BHA could not wash below the top of the lower packer on Dec-8. CT was moved to Iona-1 on Dec-8.
- Multiple slickline runs recovered more evidence of gun debris on 9-Dec and 10-Dec.
- The CT spread was moved back to Iona-2 on Dec-11.
- On Dec-12 two CT runs with a turbine specified for foam (Macdrill) and venturi basket mill shoe failed to make significant progress. It is most likely that two Macdrill turbines failed to operate downhole. A 6000-psi rated flare line elbow washed out during sand washing operations.
- On Dec-13 three downhole kotors failed a function test and vendor representatives with additional equipment (Weatherford) were mobilized. Slickline bailers recovered approximately 2900ml of sand.
- A 2-1/8" PDM and 2.3" tapered mill reached 4365.1' just inside the lower packer and a 2-1/8" PDM and 2.2" venturi basket reached only 4364.1' on Dec-14. The basket recovered several pieces of 1-11/16" PivotGun debris.
- A 1-11/16" Macdrill and 1.81" tapered diamond mill reached 4368' on Dec-15. A slickline impression block appeared to tag the top of the packer. A CT prong pulling tool run failed to pass the top of the packer.
- A 2-1/8" PDM and 2.65" venturi bailer with tungsten carbide mule shoe reached 4364.7' and recovered three large pieces of PivotGun debris on Dec-16. (See photo below). A second run to 4364.7' recovered a small amount of debris.



- Advice from Schlumberger's technical support organization in Sugarland Texas indicated that at least 82 pieces of the round debris shown in the photo above would have settled on the lower completion assembly during the previous work over.
- A 2-1/8" PDM and 10' long 2.65" venturi bailer reached 4366' but failed to recover significant debris on Dec-17. A decision was made to suspend further attempts to recover PivotGun debris until further engineering was undertaken. CT was rigged down. A Schlumberger electric log run confirmed that the depth that CT reached was the top of the lower packer.
- A slickline magnet run failed to recover any material on Dec-18.

4 PIVOTGUN DEBRIS



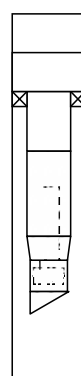
The picture to the left is a schematic of a Schlumberger 1-11/16" PivotGun in the deployed position. All of the metal components of the assembly shown remain in the well after detonation. The calculation below indicates that 872 cubic inches of debris would have landed on the lower completion in April 1999 which would have filled 0.8' of the 7" casing above the lower completion to 4362.7'.

Debris Schlumberger PivotGun debris specification

0.33 in of PivotGun debris per charge in 7" casing from SLB data sheet
 6.28 in is the ID of 7" 26# Casing
 10.21cu in debris per PivotGun charge

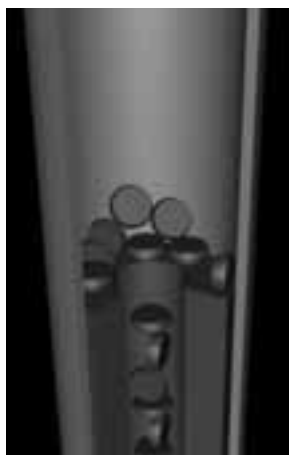
Iona-2 PivotGun debris may fill the entire lower packer and tail pipe assembly to the XN nipple

20 ft (6m) interval perforated with PivotGun at 4spf in Iona-2 above the PXN plug
 837cu in debris 82 charges @ 10.21cu in debris per PivotGun charge



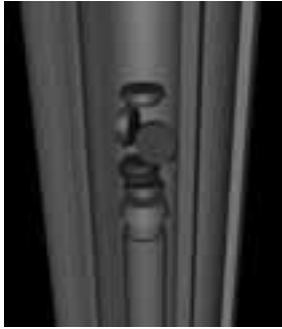
Depth	Length	Item	Diameter	Volume
4362.7 ft	0.8 ft	Fill in 7" 26# Casing	6.276 in ID	287cu in
4363.5 ft	3.6 ft	Model 84-85 DB Packer 3.406" 8 SA box	2.688 in ID	247cu in
4367.1 ft	5.4 ft	Model 80-26 Seal Bore Extension 3.406" 8 SA	2.688 in ID	366cu in
4371.5 ft	2.8 ft	XN Lock Mandrel with 2.31 PX Prong	1.900 in OD	-96cu in
4372.5 ft	0.6 ft	X-over 3.406" 8 SA box x 2-7/8 6.4# Vam pin	2.390 in ID	33cu in
4373.1 ft	1.3 ft	XN No-go nipple 2.313" 2-7/8 6.4# Vam	2.205 in ID	
4374.4 ft	0.4 ft	WL Re-entry guide 2-7/8 6.4# Vam	2.380 in ID	
4374.8 ft				

Total fill volume 837cu in



The picture to the left is a scaled schematic of the top of the lower packer assembly and some of the the large round pieces of PivotGun debris in several of the possible orientations of those pieces. The picture highlights the probability that large round pieces of debris may have entered the packer bore, seal bore extension and tail pipe assembly. Some of them could sit on the upper lip of the packer

Note that the round pieces of debris are free to rotate on top of each other which means that they will be difficult to mill. Furthermore, a slim mill assembly that manages to pass the top of the packer could become stuck if debris on the packer lip falls onto the mill.



The picture to the left is a scaled schematic of the top of the PX prong assembly and some of the the large round pieces of PivotGun debris in several of the possible orientations of those pieces.

Note that the large round pieces of debris are unlikely to pass the top of the prong though the smaller pieces shown in the photo above would pass the prong.

5 A BRIEF WORK OVER ENGINEERING RECOMMENDATION

Advice from several bit and mill suppliers with experience in milling PivotGun debris in small bore wells will be required. Case studies from Schlumberger related to recovering PivotGun debris

A costed risk analysis on the work over options for Iona-2 to achieve the original objectives is probably necessary at this time but is beyond the scope of this report.

The two major options identified at this time are as follows:

1. Mobilize a snubbing spread and conduct an under-balanced work over with a slim work string.
 - a. The major advantages of this approach are as follows:
 - the potential for sand-face damage is minimal, and
 - the total cost is probably significantly lower.
 - b. The major disadvantages of this approach are as follows:
 - the chances of achieving the objectives are probably lower, and
 - the risks of cost overruns are probably higher.
2. Mobilize a conventional work over spread then kill the well and conduct an over-balanced work over with a conventional work string.
 - a. The major advantages of this approach are as follows:
 - the chances of achieving the objectives are high, and
 - there are a number of relatively low-cost contingency options, and
 - the risks of cost overruns are probably lower.
 - b. The major disadvantages of this approach are as follows:
 - the potential for sand-face damage is probably higher, and
 - the total cost is probably higher.

Feedback from the Weatherford representative on site indicated that a suitable snubbing and pumping spread would cost US\$11,000 per operating day plus a 5000' 1-1/4 CS Hydril work string at US\$550 per day. Mobilization and demobilization ex-Queensland would be approximately A\$70,000. The spread can snub in to 4000' in about five hours.

The PX plug and prong could be recovered for approximately US\$250,000 in operating, consumable and mobilization charges assuming that the PivotGun debris can be removed in ten days snubbing.

6 APPENDICES

6.1 TXU Daily Reports

6.2 Schlumberger Coiled Tubing Field Reports

6.3 Expertest Slickline Field Reports

6.4 Weatherford Downhole Tools Field Reports

6.5 Schlumberger Electric Logging Field Reports

6.6 Expenditure Estimate