

**Milling and Breaking Loose a  
Neo Positive-sealing Elastomeric Plug (NeoPEP)  
In Casing  
Document # DMI-0500-0000**

The following subject matter is a best effort attempt to describe a process that could be used to mill and break loose a NeoPEP in a wellbore. The text below is a broad brush summary and it is not intended to serve as a standalone procedural document. It should be reviewed and revised by a professional subject matter expert in the art of milling, drilling and removing bridge plugs from wellbores. The text should be revised to include all essential technical details before a suitable working document can be achieved and therein meet the approval and recommendations of the expert before any related field operations can commence. NeoProducts disclaims any responsibility for any NeoPEP milling and removal operations.

1. The BHAs described below, can be used to mill and break loose a NeoPEP bridge in casing;
  - a) BHA #1
  - b) Coiled Tubing Connector
  - c) Motor Head Assembly
  - d) Hydraulic Jar
  - e) Junk Baskets (if enough lubricators available)
  - f) Downhole Motor
  - g) Washover shoe
    - a. The washover shoe is the most important tool, and must have the following characteristics:
      - i. Should be built with Tungsten Carbide
      - ii. Its length must be enough to swallow the distance from the top to the bottom anchors
      - iii. ID must be enough to swallow the NeoPEP top fish neck sub
      - iv. OD must be as close as possible to the casing ID
      - v. The washover shoe must have water passages to allow fluid flow out the bottom end of the shoe.
2. RIH BHA #1 in the hole and tag the TOC.
3. Pick up 25 ft and begin milling operations.
4. Circulate gelled brine to lift cement plug pieces and debris to the surface.

	<b>Milling Procedures</b>	<b>Date: 02/20/2015</b>	<b>Page 1 of 2</b>
		<b>File Number: DMI-0500-0000</b>	<b>Rev. A</b>

5. Closely monitor and examine returns for cement, metallic and rubber pieces.
6. Descend to the TOC and begin milling operations.
7. Adjust milling parameters as needed to make hole.
8. Pull the BHA back to the surface when adjusting the milling parameters is not effective and the mill is no longer making hole.
9. Inspected the mill for wear signs that the washover shoe was turning on top of the NeoPEP anchors.
10. Make up BHA #2 to mill the NeoPEP anchors and push the NeoPEP to bottom.
11. RIH and tag top of NeoPEP without pump (dry tag).
12. Pick up 25 ft and begin milling operations.
13. Descend to the top of the NeoPEP and begin milling the anchors.
14. Descend slowly (0.2 to 0.3 FPM) using minimum weight (~1,000 lb maximum).
15. Continue to circulate gelled brine at a sufficient rate to lift cement, metallic and rubber pieces to the surface.
16. Continue to examine returns for metallic and rubber pieces from the NeoPEP.
17. Adjust milling parameters to establish and maintain a slow and steady milling rate.
18. When the amount of metal filings in the circulated returns has substantially diminished and the amount of rubber pieces substantially increase it is likely that the bottom end of the mill has burned through the anchor and ant-extrusion systems and is into the seal system.
19. Continue milling, it is likely that the NeoPEP will break loose and begin rotating. Do not stop operations.
20. Once the NeoPEP is rotationally free the Operating Company must choose what to do with the remains of the NeoPEP.
21. Continue on from this point per the instructions of the onsite Consultant and Competent Authority.

	<b>Milling Procedures</b>	<b>Date: 02/20/2015</b>	<b>Page 2 of 2</b>
		<b>File Number:</b>	<b>Rev. A</b>
		<b>DMI-0500-0000</b>	