VORTEX VENTURES TECHNICAL BULLETIN

TB–005

Processing GEL into Oil Based Mud

08/27/2009

- SCOPE

The scope of this Bulletin is to aid in the processing of GEL into Oil Based Mud.

- CHECKLIST

- Do the calculations to insure that there is enough head produced by the pump to process the heaviest weighted MUD.

- Survey the piping to make sure there are no obstructions in the lines (I.e., partially closed valves, plugs, etc.). It is best not to downsize the piping on the discharge side of the Eductor.(6" Eductor – 6" or more piping)

- Periodically check the Nozzle for wear. Measure tip to tip on the outer lobe portion of the orifice and also the inner tips of the lobes. Compare to original size of nozzle, if there is wear it is suggested to change the nozzle.

- Start the pump to produce motive flow. Check the pressure and vacuum gauges on the Eductor for approximately 60 - 70 PSI (pressure) and 26" Hg (vacuum)(MUD weight approx. 10/ppg). If there is 60 PSI and vacuum ranges lower than 20"Hg this is an indication of a worn Nozzle.

- If the Radial Premixer is installed, open the 2" bypass ball valve and circulate the motive fluid for a few minutes as this helps clean the mixing chamber.

- If you do not achieve the required motive velocity, check the piping for obstructions. If no obstructions are found then most likely the pump is not sized properly to provide required motive velocity.

- Due to the conveying properties of Oil based MUD, it is suggested that the size of the Nozzle be the smallest size orifice that will work. The smaller Nozzle will produce higher PSI and more velocity which in turn will help draw the GEL into the solution. For example, if you are using a 2" Nozzle and not achieving the required velocity through the Nozzle change to a 1 ½" Nozzle for increased pressure and velocity.

- If you are still having problems, contact the Vortex Ventures Service Engineer at rward@vortexventures.com or vortex@vortexventures.com for more assistance.