30-045-20958

## OPTIONS/CONSIDERATIONS
## FOR WELL No. 1 FOSHAY
## SECTION 32, T.24 N., R. 12 W.
### 09  23N  13W

John Leeper:

Provided below are some of our thoughts and those of industry (specialized in valve repair and lubrications) on possible approaches to controlling the flow of water from the No. 1 Foshay well.

1. Have Quadco or Cameron (specialist in valve repair, lubrication, and testing), in the Farmington area, inject grease or lubricants into the valve box area and try and free the valve up and close off the flow of water. Estimated cost would be approximately $1,000.

2. Build a box around the well head and freeze the water. Keep frozen and replace old valve with a new one. Estimate of cost is to difficult to make without having contractor do a site visit to assess the situation. However, it will be expensive to say the least.

3. Least desirable and most expensive is the option to plug the well and drill a shallow fresh water well. Estimated cost to plug the well would run $30,000 plus, depending on casing integrity, if plugs identified in the well file are in place and functioning, etc.

Another thing to consider, is make working conditions easier and more desirable by bring in a back hoe and trenching to channel water away from the well head. Placing PVC or some type of hose over the leaking pipe elbow and directing the flow of water away from the well head would help keep the well head area dry.

If the lubrication of the valve is successful, in options number one above, consideration to double stacking valves on the well head should be thought about and plumbing to divert water flow away from the well head for delivery to livestock. Double stacking would provide additional protection in case one valve were to fail or freeze up again.

If you would like to talk to one of our engineers, want to schedule a site visit or have any questions, please feel free to call me. We will be glad to assist in anyway that we can. Thanks!

John leeper is with the Navajo Nation Water Resources Management in Fort Defiance, Az.

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