

## Council Meeting Staff Report

May 16, 2018

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<b>Agenda No.:</b>	7.C
<b>Indexes (Council Goals):</b>	BCC - N/A
<b>Presenters:</b>	James Alarid
<b>Legislative File:</b>	10742-18

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### Title

Approval of Budget Revision No. 2018-14 for the Purpose of Otowi Well No. 2

### Recommended Action

**I move that the Board of Public Utilities approve Budget Revision 2018-14 as summarized on attachment A and that the attachment be made a part of the minutes of the meeting. I further move the Budget Revision be forward to Council for approval.**

### Staff Recommendation

Staff recommends that the Board approve as presented.

### Body

The purpose of this item is to consider a budget revision relating to the drilling of the Otowi Well No 2. The budget revision increases the expenditure budget by \$350,000 for possible change orders to the construction contract for Otowi Well No 2 (Contract: AGR17-30). No amendment is necessary because the agreement allows for change orders (for unforeseen conditions in drilling the well) to increase funding up to the total amount budgeted. A summary of the budget revision and specific details relating to this item are in Attachment A.

The drilling subcontractor mobilized and began drilling in January 2018. A layer of basalt was encountered about 50' below ground which has caused multiple complications in the drilling operation due to the presence of fractures in the basalt. Soon after beginning to drill in the basalt, the rig began experiencing a loss of recirculating mud due to fractures in the basalt that were allowing the drilling mud to escape. Mitigation measures were attempted including placing additives to the mud and cementing the bore hole to plug the fractures. After several attempts to restore consistent recirculation the driller stopped due to the risk of getting the drill bit stuck down hole from all of the cuttings that were depositing due to the loss of recirculating fluids which extract the cuttings.

The solution recommended by the driller was to change the drilling method to an air rotary drilling method. This method uses high pressure air to remove the cuttings from the bore hole. The change in drilling method involved significant modification to the drilling rig and additional support equipment to operate. The fractured basalt creating the problem was an unforeseen condition and a change order was negotiated to make the change in drilling methods. The cost of the change order was \$345,660.70.

### Alternatives

If this Budget Revision is not approved additional change orders that may occur due to unforeseen conditions will have to be brought to the Utility Board and Council. The approval process takes three-five weeks, and this time will be lost in drilling production and will be the subject of a time delay claim.

### Fiscal and Staff Impact

The contract was awarded in the amount of \$2,583,694.07 and a contingency of \$416,306.07 for a total of \$3,000,000.14. The change order to change the drilling method has obligated the majority of the existing contingency. Additional contingency to date has been obligated to cementing the bore hole to stop the loss of drilling fluids and return air. Remaining contingency is approximately

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\$20,000.

The additional \$350,000 of contingency will only be used if a justified change in conditions is encountered. If a future change order is necessary, it will be negotiated and executed as stipulated in the contract. Given the nature of well drilling and the unknown geological conditions, additional cementing of the borehole is expected to require future change orders.

**Attachments**

A - Budget Revision No. 2018-14