

APPENDIX L

Well Plugging and Abandonment Costs Estimates

Well Plugging and Abandonment Bid Request

Location: Powertech USA, Dewey-Burdock Project
13 miles northwest of Edgemont, South Dakota on Dewey Road

Description of work: **Bid is for total job of 100 wells.**

Remove down hole pipe (2" coiled polyethylene). Install tremie pipe to total depth. Mix and pump grout filling well casing to surface. Remove tremie pipe. Cut and remove casing 4 feet below surface. Cover with cement plug. Back fill and compact back to grade. All labor, materials and equipment to be provided on location by the contractor.

Casing: 5" PVC, SDR 17 approx. 4.91" Inside Diameter
Average depth: 550 feet (casing volume approx. 15 bbl)
Plugging Material: Cement grout or bentonite grout as per ARSD 74:02:04:67
Cemented from total depth to surface, possible artesian conditions
VENDOR (name and address): Davis Drilling
P.O. Box 2302, Gillette, WY 82717

<u>Item</u>	<u>Estimate</u>
<u>Plugging materials</u>	\$ <u>See note below</u>
<u>Description of materials:</u> <u>Class C Cement (bulk)</u>	
<u>Equipment</u>	\$ <u>Included</u>
<u>Types and quantity of equipment to be supplied:</u> <u>20 bbl cement tank, 5X8 Duplex Pump Coil Tubing Unit</u>	
<u>Labor</u>	\$ <u>Included</u>
<u>Crew description:</u> <u>3 Man</u>	
<u>Other</u>	\$ <u>1,000 per well</u>
<u>Explanation of Other:</u> <u>\$1000.00 per well, Powertech provides the cement</u>	
<u>Estimate Completion Time:</u> <u>3-4 wells per day</u>	<u>Total Estimate: \$ 100,000.00</u>
<u>Prepared by:</u> <u>Stan Davis</u>	<u>Dated:</u> _____

Stan Davis



74:02:04:67. Requirements for plugging wells or test holes completed into confined aquifers or encountering more than one aquifer. All abandoned or forfeited wells or test holes that are completed into confined aquifers or that encounter more than one aquifer must be plugged with bentonite grout if the weight of the bentonite grout column is sufficient to overcome the bottom hole pressure or must be plugged with cement grout placed from the bottom of the well or hole to within eight feet of the ground surface. Cement grout must be placed from eight feet below ground surface to within three feet of the ground surface. The top three feet may be filled with native material. If a pipe cannot be lowered inside the well casing to place grout from the bottom to the top, the well may be plugged by making a tight connection to the top of the casing and pumping a volume of cement grout, sufficient to fill the well, under pressure into the well. Bentonite grout may not be used if the well must be plugged by making a tight connection to the top of the casing and pumping the grout in under pressure. If it cannot be verified that a well's casing was grouted in accordance with this chapter, an effort must be made to plug the annulus from the bottom of the annulus up to the ground surface with the same type of material or materials required for plugging inside the casing.

Source: 12 SDR 50, effective September 29, 1985; 13 SDR 129, 13 SDR 141, effective July 1, 1987; 18 SDR 224, effective July 16, 1992.

General Authority: SDCL 46-2-5, 46-6-6.1, 46-6-9, 46-6-20, 46-6-27.

Law Implemented: SDCL 46-2-9, 46-6-6.1, 46-6-10, 46-6-14, 46-6-18, 46-6-20, 46-6-27, 46-6-28.

Note: Bentonite manufactured for use as a drilling fluid does not meet the requirements for bentonite grout. Bentonite grout may be used to plug wells at depths greater than eight feet. The driller should be aware of the limitations inherent in bentonite grout. The low density of bentonite grout may make it inappropriate for use as a plug when higher hydrostatic pressure is required.

Jim Munro

From: jfinnegan@gcc.com
Sent: Friday, February 10, 2012 5:01 PM
To: jmunro@harneypeakresources.com
Subject: type V cement estimate for Edgemont, SD
Categories: Harney Peak Resources

Hello Jim,

I'm following up on our conversation from earlier this morning regarding a budget number for you to use on a project you are looking into at Edgemont, SD.

Assumptions:

2,000 tons of type V sulfate resistant cement
\$125.00 per ton FOB our cement plant in Rapid City (2012 dollars)
\$15.42 freight rate (which includes a current fuel surcharge of 27%)
for a delivered cost at job of **\$140.42**
\$625 per week for a storage pig
plus incidentals such as mobilization and demobilization of pig and fuel to power the blower.

This is an estimate for if I was to quote the job today for work in 2012
If you think the work would go in 2013, it would be a safe assumption to add 5% to the above estimate.

If you or a sub need a firm quote from me, please call me at: 303-453-9196. I am the sales manager for the company and am currently covering the vacant Rapid City position until I get someone hired.
Thank you for contacting us.

Thanks,

Joe Finnegan
GCC of America
130 Rampart Way, Suite 205
Denver, CO 80230
Office: 303-739-5900

visit our website at www.gccusa.com