MARBLETON MUNICIPAL WATER WELL NUMBER SIX

EXECUTIVE SUMMARY
OF DRILLING, DEVELOPMENT AND TESTING

SUBMITTED TO

THE WYOMING WATER DEVELOPMENT COMMISSION
AND THE TOWN OF MARBLETON, WYOMING

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Introduction:
The town of Marbleton made application to the Wyoming Water Development Commission to add a well to their existing municipal water system. Following approval of this application, JFC Engineers, Architects, Surveyors, was chosen as the engineering firm to design and inspect the construction of the well. 75 percent of the cost for design and construction of the well was to come from the Wyoming Water Development Commission, while the remaining 25 percent was to be funded by the town of Marbleton. Inberg-Miller Engineers was subcontracted by JFC to evaluate the hydrogeological parameters of the well.

Background:
The town of Marbleton, is a rural community with a population of about 600. Marbleton is located in southwestern Sublette County, about 33 miles southwest of Pinedale (see attached map EX 1). There are five existing wells within the town which provide the current water supply. In order to meet peak needs and provide water for emergency services, a sixth well was needed. A portion of the Towns' income is provided by selling potable water.

Scope:
Members of the Town council had very definite ideas about design considerations for the new well. The major consideration was that the well be extended down to at least 1000 feet, in order to penetrate as much of the aquifer as possible, and thereby access water at deeper levels than existing wells.

Results:
Marbleton Municipal Water Well Number Six was drilled to 1016 feet, with 1008.5 feet of 8 5/8ths inch OD casing set below ground level. Of this 1008.5 feet, 240 feet of stainless steel well screen with either 0.020 or 0.035 slot openings was placed opposite the most promising
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sand zones. The well screen slot size was determined from sieve analyses of drill cuttings taken at each sand zone. Gravel pack was placed where possible, and sized to give optimum flow into the well. Pump tests subsequent to development provided critical hydrogeological data, and indicated that the well could produce at a useful rate. Water quality testing as required by the Wyoming Water Development Commission took place during and at the end of pump testing. Results of the water quality testing initially had unacceptable levels of Cadmium and Mercury. A re-test of the well done during March of 2002, with samples sent to two independent labs, gave either very low levels of Cadmium and Mercury, or no detectable Cadmium and Mercury.

Conclusions:

It can be surmised from the pump and water quality testing of the Marbleton Municipal Water Well Number Six, that it should be able to produce useful amounts of potable water into the foreseeable future. The design for the well pump will be a 50HP Grundfos model 230-S500-16, with a maximum output of about 280 GPM.