



Aerojet Nuclear Company

Interoffice Correspondence

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Rogers 326

RRGF #1 SUPPLY PUMP INSTALLATION - PROJECT NO. 82801-008, 552 - WLG-23-75

The down hole supply pumping system installation at RRGF #1 was completed November 22, 1975. The installation procedure, exact location of the down-hole equipment, and the check out tests are described in this document.

The well was shut-in with the installation of a Model "KB" packer supplied by the Baker Oil Tool Company. The packer was set at 850 feet below grade level in the 13-3/8 inch well casing. The installation was accomplished with an electric line unit by Schlumberger, Incorporated. The packer installation was preceded by a casing collar log and a gauge ring and junk basket run. This insured that the packer setting location was between casing collars and the casing was free from debris that might prevent the packer insertion.

The existing casing head, spool, and master valve was removed and replaced with WKM Brewster Wellhead Company components. The new well head Christmas tree includes a new casing head with a guide bushing and secondary packing assembly to insure complete environmental protection for the upper aquifers and the well. The environmental expansion spool contains the primary packing assembly and allows up to 30-inches of production casing growth. A 12-inch through-conduit master valve completes the basic Christmas tree assembly.

The down hole supply pump system is comprised of three basic components. These are the 4-1/2 inch stinger, the Reda pump, and the 8-5/8 inch production tubing. The 4-1/2 inch stinger was installed in nominal 30 feet joints totaling 179.62 ft. The first section of the stinger was slotted to permit flow through the packer and into the annulus above the packer (Ref: Dwg. #406514).

The stinger is attached to the pump motor with a 4-1/2" x 2-1/2" swage. The pump is suspended from a hanger spool on the Christmas tree assembly. Fifteen joints of 8-5/8 inch casing totaling 609.98 feet was installed locating the pump inlet at 623.06 feet below the master valve flange. The stinger penetration through the production packer is 6.19 feet.

The remaining components of the Christmas tree assembly were installed and connected to the flow loop piping completing the supply pump installation (Ref: Dwg. #406494).

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The initial checkout test lasted only 30 minutes. The unit and system performed as expected; however, the well drew down very rapidly and appeared to drop to approximately 500 ft. below the surface. The flowrate was approximately 1400 gpm. Additional drawdown studies will be made as pumping tests continue.

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